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Clinical Medicine and Surgery

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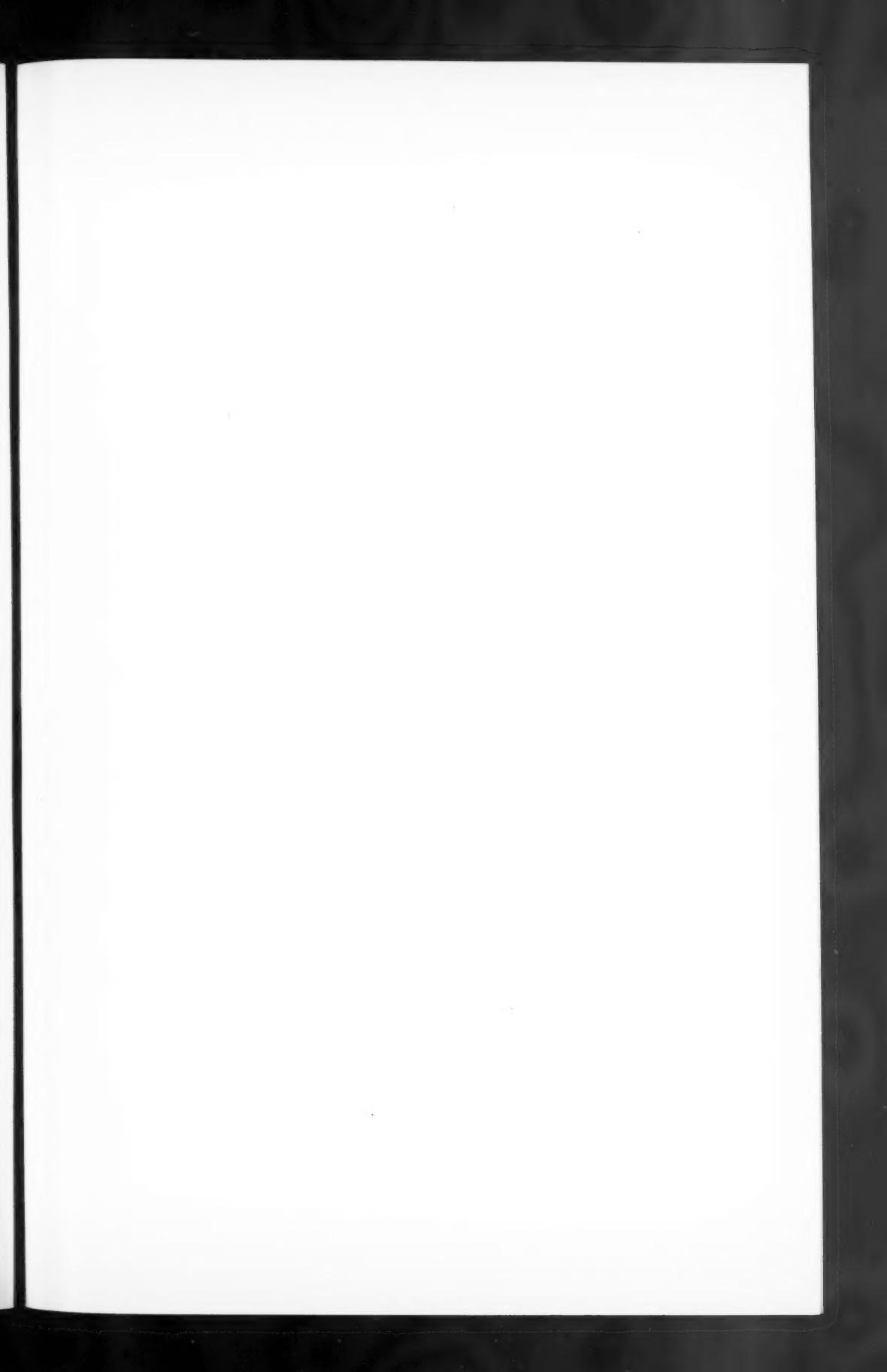


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AURELIUS CORNELIUS CELSUS
THE FIRST MEDICAL HISTORIAN

CLINICAL MEDICINE AND SURGERY

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Celsus

MEDICINE owes much to many men who were not regular practitioners of the healing art, in many lines and in all times, but among the ancients there were few or none in this class who did the profession greater service than that performed by Aurelius Cornelius Celsus, who lived in the reign of Tiberius Caesar.

Celsus was born about the year 25 B.C. and was, so far as the records show, educated as a scholarly Roman gentleman, rather than as a physician; but his interest in Medicine was so great that, while his station in life was such that he did not care to practice as a clinician, he studied everything on the subject upon which he could lay his hands, and translated many of the works of Hippocrates and other Greek physicians into such elegant Latin that he is sometimes spoken of as the Cicero of Medicine. It seems probable that, on occasions, he rendered free medical service to his personal friends.

The great work of Celsus, the oldest medical document after the Hippocratic writings, is known as the *De re medicina*, and probably represents rather fully the medical knowledge of his time, written as one might present it to highly educated

laymen. It consists of eight books, the first four of which deal with diseases amenable to treatment by diet and hygienic measures, while the last four discuss conditions in which drugs and surgery are indicated.

Among the interesting points in this monumental compilation is the first use of the word "insanity" (*Insania*); the recommendation of nutrient enemas; the first accounts of the use of the ligature; the earliest suggestion of the nature of heart disease; a classic description of the operation of lateral lithotomy (the Romans brought surgery to a high point and specialized to a considerable extent); and a flash of intuition that the blood might circulate and return to its starting point. He was the first medical historian.

Celsus was not highly regarded by the Roman practitioners of his day—which is not surprising—and the medieval commentators scarcely mentioned him; but, with the Revival of Learning, the *De re medicina* was one of the first medical books to be printed (Florence, 1478), and has passed through more reprintings than has any other ancient (or, perhaps, modern) scientific treatise. So, even though he did not live to see his triumph (his death occurred about the year 50 A.D.), he had

his posthumous revenge upon those who had regarded him lightly and is now ranked among the great figures in medical history, while even the names of those who belittled his contributions have long since been forgotten.

If you have knowledge, let others light their
candles at it.—Margaret Fuller.

Ephedrine Habit

EPHEDRINE is a comparatively young member of the alkaloid family, but, my, it's large for its age!

After several years of about as extensive and intensive study as any drug ever received, conducted by some of the foremost scientific observers in the world, as well as by hundreds, if not thousands, of less celebrated clinicians and researchers, the conclusion has been reached that this drug does not possess habit-forming properties.

In view of this fact, it seems rather ridiculous to find a layman (Reginald Wright Kaufmann) arraigning ephedrine, in a lay magazine of large circulation, as a fit companion for cocaine in the family of dangerous narcotics.

The European "expert," with whose opinion he bolsters up this surprising statement, is not recognized among scientific men; and the American pharmacologist, whose tentative prophecies in this line Kaufmann also quotes, is, not only superannuated, but has recently been mixed up with a purveyor of ergot, who has been persistently and vociferously trying for some time to have all other brands of ergot than his declared unfit for medicinal use. This is not a high recommendation of the domestic authority's judgment.

Furthermore, this is a rather distressing commentary upon the policy of such a "moulder of public opinion" as the *Ladies Home Journal*, which published Mr. Kaufmann's story. It would appear that the sensational nature, rather than the sound basis in fact or the consensus of leaders in the field, is the condition upon which this pub-

lication selects its articles for home consumption. The editors may, of course, have been misled, but it would be a good plan, perhaps, to have allegedly scientific contributions passed upon by someone who knows.

Until such capable and well known students and experimenters as Chen, Schmidt, Read, Thomas, Balyeat and others, who, on the basis of very wide experience, have declared their opinion that ephedrine is not a habit-forming drug, change their opinion, physicians may feel perfectly safe in prescribing this valuable remedy as they have been doing.

Science is that which one knows.—Laennec.

THE FUTURE OF MEDICINE COMPETITION

THE symposium on the Future of Medicine excited a great deal of interest. The returns are now in and the ballots counted. The winners are:

First prize to Dr. S. A. Knopf, New York City.

Second prize to Dr. Edw. H. Ochsner, Chicago.

Third prize to Dr. J. Lewis Webb, Chicago.

Checks for the amounts of the prizes have been mailed to the fortunate ones, and the business side of the competition is closed; but the reverberations of those thought-stimulating essays will continue to echo for months. It was a really worth-while effort, and those who did not win prizes will feel, we are sure, that their time was well spent in writing the articles and in reading those of the other contestants.

One more symposium is before us for this year—the one on parenteral medication—and we hope that it, too, will rouse a large measure of enthusiasm. The papers for this competition should be in our hands not later than October 5 (we have advanced the date five days, in order to give the dilatory ones a bit more time). All articles dealing with the administration of drugs by injection will be eligible to participate

in this round-table discussion; and the more there are, the more fun and benefit we will all get out of it.

We sincerely want to know how our readers feel about symposiums like this. Do you want more of them? What subjects would you like to see discussed next year? On what subjects would you like to write a competitive article?

A very few minutes will be enough time to tell us how you feel about these matters. Please let us hear from as many as possible.

When love and skill work together, expect a masterpiece.—John Ruskin.

MEDICAL SERVICE ON INSTALLMENTS

WHETHER one thinks it is a good thing or not, the installment system of buying (euphemistically known as "purchasing out of income") seems to be, not merely here to stay, but growing steadily and rapidly.

When the manufacturers of more or less expensive luxuries and near-luxuries found that their capacity for production exceeded the demand, something had to be done to stimulate the demand, and the installment plan is the result. One can now buy anything, from groceries to garages on "easy payments," and the sale of automobiles, radios, pianos, vacuum cleaners, furniture and hundreds of other things is, in consequence, much easier and more brisk than it otherwise would have been. Moreover, people do not howl about the expense as they would if it were necessary to plunk down the entire sum in one roll.

But the manufacturers could not afford to maintain a clerical staff sufficient to look after all of the details of thousands of installment accounts, so the acceptance companies came into being to handle these matters.

The principle of the thing is this: The purchaser of a radio, for instance, makes a down payment of \$25 on a \$125 machine and signs ten notes for \$10 each, payable one a month, plus a reasonable interest.

The dealer indorses the notes, takes them to the acceptance company and receives their face value, less ten or fifteen percent or thereabouts, at once. The company collects the payments.

Of course, credit ratings are looked up all around; and equally of course, the dealer sets the price of the instrument at a figure which includes his discount. The buyer pays a little more, but coming in small dribbles, it doesn't seem so hard. Everybody is happy.

One reason why so much fuss is being made about the costs of medical service is that people are, or have been, expected to write a check for the entire amount when it was demanded. If they could budget this expense after it is incurred, instead of before, much of the outcry would die away.

An operation at \$200 looks formidable, to a patient of small or moderate income; but \$50 down and ten payments of \$15 each sounds reasonable to him. The surgeon receives \$175 to \$185 for his services at once, and has no trouble or expense in collecting his bill.

Of course, illness and automobiles are not quite in the same class. If a man comes down with pneumonia or breaks an arm the physician he calls hardly has time, in most cases, to look up his credit rating before ministering to his needs. But the time to get a settlement for services is when they are rendered. When the case is discharged the bill should be presented. If the patient can pay it, it might be good business to give him a discount for cash, as is done in most other lines. If not, the installment plan of settlement should be suggested immediately. Many patients would welcome a method by which they could settle with the doctor promptly.

Operations of election are, in a sense, luxuries and should be financed at leisure. All chronic cases should be accepted for treatment on a flat-rate basis and financed in advance. Physicians have much to learn from the big business men.

Such services are not, at present, available everywhere, but things look as if they would be in the not distant future. The speed with which they come will depend largely upon the way the proposition is received by medical men. Any such proposition should, however, be scrutinized with great care because, to be safe and successful, such an enterprise must be strongly financed and honestly and intelligently managed. Many physicians have lost money by becoming mixed up with fly-by-night financial concerns.

We suggest that every one who has an opportunity to do so should look into this matter as soon as practicable and should consider how the plan can be adapted to his needs. It would appear that this may be a solution for many of the doctor's most pressing economic problems.

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While you feel wiser than more successful men, you will never use successful methods.—Robt. Quillen.

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Get Under the Tree With a Basket

WHEN someone shakes the apple tree, the fellow who stands there with no hat and with holes in his pockets is out of luck. Those who benefit by such shaking are the ones who are ready, on the spot, with a good, big basket.

The matter of periodic physical examinations or health audits is being agitated with much vigor by the big life insurance companies, industrial concerns, boards of health and medical societies all over the country. In increasing numbers, people are being educated to the value of these examinations, and the time is not far distant when the demand for them will be well nigh universal. Right now, the physician who turns up his nose at the idea or neglects to prepare himself to make such examinations is greasing the skids.

There is no excuse, today, for failure to take advantage of this wonderful opportunity for service and prosperity. A dollar sent to the American Medical Association will purchase their "Manual of Periodic

Examinations" and enough examination blanks to last some time; or one may profitably spend also a little additional for a larger book on the subject.* A quart or so of midnight oil (or a few kilowatts of current) will enable any physician to add the contents of these manuals to the medical education he already has and prepare him to do a real job.

Almost all of the apparatus needed is already a part of the average doctor's professional equipment; but if he has to spend a hundred dollars or so for a microscope, centrifuge, weighing scales and so on, it will prove to be the most profitable investment he ever made, provided he uses the equipment with zeal and intelligence.

This thing isn't going to wait for the sluggards and reactionaries. It is here now, and going stronger every day. Sew up the holes in your pockets, if you refuse to do any more than that; but if you have good sense, get a big basket—the bigger the better—and get under the tree.

We stand ready to help you with advice and suggestions in any way that we can, but, when it comes down to brass tacks, nobody can endow you with common sense or force a good thing upon you. Here it is. Will you take it or leave it?

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No physician should attempt to do what he cannot do well.—Dr. Walter J. Highman.

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THE PHARMACIST

NINE TENTHS of the people who go into a drug store these days, do so to get a banana split or a cigar or a lip stick or a pound of coffee—and they never notice or think of the quiet place at the back, where a man of science is compounding the prescriptions. That fellow doesn't make any noise; but the doctors know him, and so do the people who have sickness in their families.

Five years ago it seemed advisable to bring the pharmacist out of his seclusion for

*"How to Make the Periodic Health Examination," Fisk and Crawford; The Macmillan Co., New York. Price \$4.00.

a little while each year and introduce him to the people of the country, in order that they might not forget that, in every city, village and hamlet, a highly trained man is ready at all times to assist the doctor by preparing drugs for his patients.

And so, in 1925, the third week in October was set aside as "Pharmacy Week"—a time when the druggist might appear before the world in his professional capacity and celebrate the magnitude of his accomplishments and the importance of his labors for the public.

This year the sixth observance of Pharmacy Week will see a wide distribution of information about the compounder and dispenser of drugs, by means of advertisements, radio broadcasts, magazine articles, window displays and all the complex mechanisms of modern propaganda—not to boom the druggist as a stationer or restauranteur, but to remind his neighbors and the public in general that, under the veneer of the versatile shopkeeper, he is always a dignified professional man. It is all an educational, not a commercial, enterprise.

No one knows so well as the physician what a debt we owe to the careful, intelligent and sincere pharmacist, and no group should cooperate so readily and enthusiastically as the doctors in making the 1930 Pharmacy Week a big success.

I hold every man a debtor to his profession; from which, as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereto.—Lord Verulam.

CARBON MONOXIDE

THE days are growing shorter and the mornings snappier. Presently the season will be upon us when certain foolish persons will start the engines of their automobiles in closed garages and then proceed to change a tire or do some other tinkering, thus providing excitement for the nearest fire company or hospital or business for the undertaker.

Every year, in New York City, about a thousand people die from carbon monoxide poisoning. And that, of course, makes no account of the hundreds or thousands who are more or less severely poisoned, but recover.

For the closed-garage-running-engine variety of this type of poisoning, the only prophylactic is repeated warnings to the public at large, in which every physician should do his part every autumn. In many cases the prophylactic will not "take," because there is nothing for it to work upon, and the Fool-Killer will claim his own. Nevertheless, we ought to spread the information, repeatedly, by word of mouth and in the local papers. Also, we ought to stir up the local boards of health to make some regulations regarding the ventilation of public garages, if they haven't done so already.

But there is another side to the subject, where the element of foolishness on the part of the sufferer is not so obvious.

Gas is in very wide use for heating and cooking, and the supply furnished by many cities is rich in carbon monoxide. If the pipes and fixtures through which the gas is distributed and used are defective, enough may escape to cause serious chronic, or even dangerous acute, poisoning, especially during the cold months when many less-intelligent people seal their living quarters almost hermetically. Poorly designed stoves, the use of flexible tubing (which generally leaks) for temporary connections and the lack of exhaust flues over gas water heaters are the commonest sources of trouble.

The public should be reminded, periodically, to have all gas fixtures inspected, from time to time, and warned of the dangers which may arise from neglect of this precaution.

Physicians should not forget that many cases of obstinate headache, lassitude, languor, nausea and general ill-health, which show no characteristic physical causes and do not yield to treatment, are due to chronic car-

bon monoxide poisoning and will clear up when the patient's gas fixtures (not personal) are put in good condition and his (or, generally *her*) home properly ventilated.

Other more serious and less common conditions, such as paroxysmal hemoglobinuria and peripheral neuronitis (due to hemorrhages into nerve trunks), can be traced to the same cause.

If called to treat a case of acute poisoning, begin prone-pressure artificial respiration at once, while waiting for a supply of oxygen and carbon dioxide (the latter in the proportion of seven to ten percent, or even more), or of oxygen alone, if the dioxide is not available, and keep up the movements and the inhalations until the patient's pulse and temperature are normal.

Keep the patient *warm* and keep him quiet for some time after he seems to be out of danger. Give no hypodermic medication and do not attempt a blood transfusion. The artificial respiration and oxygen-carbon dioxide inhalations will do the business, if used intelligently and long enough—provided, of course, that the patient has not gone beyond the reach of our skill.

Refresh your mind, this autumn and every autumn, on all the facts connected with carbon monoxide and pass the information along. Your neighbor, or even, perhaps, your wife may be the next one to keel over, and you must be prepared to meet the emergency promptly, for lost minutes cannot be retrieved, and may mean the death of the patient.

DUNE DAYS

*There is a peace that passeth all believing,
There is a joy that maketh all things new—
A happiness that leaves no room for grieving.
And makes me know that all good things are true.*

*Among the sand hills I forget ambition
And all the petty strife for wealth and power.
I feel that all my hopes have reached fruition
And know that I am master of this hour.*

*The ripple of the waves moves me to laughter,
The golden sunset almost makes me weep,
The moon comes up, with Venus following after.
The camp-fire dies. The time has come for sleep.*

*Sweet dune days, weave your fairy spell around me
And purge my heart of aught but love and joy,
Make me again as when this life first found me.
Let me rejoice as when I was a boy!*

GEORGE BURT LAKE,
in "An Apostle of Joy."

LEADING ARTICLES

Preventive Medicine and Prevention of Cancer

By JOSEPH COLT BLOODGOOD, M.D., Baltimore, Md.

GARRISON, in his "History of Medicine," records that Credé, of Berlin, professor of obstetrics, introduced two things of capital importance: One, in 1884, the instillation of silver nitrate solution into the eyes of the newborn; the other, his external manipulations for removing the placenta. The chief cause of blindness in the newborn is due to the neglect of the former preventive measure.

It is forty-five years since Credé's suggestion. In my obstetric practice, when a student at the University of Pennsylvania, in 1890, I followed the instructions of the department and dropped into the eyes of the babies I delivered this solution which, with the rarest exceptions, is a protection against blindness due to gonococcal infection. There is no question that this form of blindness is rapidly diminishing, because the number of midwives, nurses and doctors who never neglect this precaution, is increasing.

The modern infant should receive its baptism of prevention the moment its eyes come in contact with the outside world.

PUERPERAL FEVER

Oliver Wendel Holmes, although, as Garrison said, he made no discoveries of importance, yet his work on puerperal fever (1843) is always mentioned in every history of preventive medicine.

William Osler often said to us, that when Holmes' admirers asked him what labors of his he was most proud of, he always replied that he was most proud of his work on pointing out the cause of childbed fever,

before the army of "bugs" (bacteria) was discovered.

The protection of the mother from blood-poisoning was largely started by the preachings and writings of Oliver Wendel Holmes; then by the discovery of the blood-poisoning "bugs," which led to the science of bacteriology and what is now known as surgical or medical cleanliness, which consists of asepsis (the making of everything clean and sterile by heat) and antisepsis, which is the employment of solutions which kill or inhibit the bacteria that cannot be destroyed in any other way. The last link in the chain of this chapter in preventive medicine is the wearing of rubber gloves by surgeons and nurses.

PREGNATAL CARE

Since Holmes, Pasteur, Lister, Credé, and many others, there has developed the modern science of obstetrics. When women, through environment and education, send for the doctor the moment they become expectant and remain under his care and that of the nursing profession, the dangers of childbearing are reduced to such an insignificant number that they need not be considered, and no woman should fear maternity. Practically all of these protective measures are due to the investigations along the lines of preventive medicine.

RICKETS

This deforming disease of bone, in which other organs are also involved, has disappeared from all regions of the world where mothers and infants receive proper food and

sufficient sunlight. The protection of the child from rickets begins with the food of the expectant mother.

The control of rickets was made possible by a long series of researches which have led to the discovery of the essential foods and the vitamins—more milk, more green vegetables, more juices of fruit (like oranges and grape fruit), whole wheat bread and cod-liver oil for mother and child. The statement "more milk" applies to adults, as well as to children.

The study of rickets has also led to the recognition of the tremendous health value of sunlight, and the series of experiments now going on to find a substitute, if possible, for the health-giving rays in sunlight. The best substitute at this moment is the ultraviolet rays or the Finsen light.

TUBERCULOSIS

The control of tuberculosis has been due entirely to prevention. We have, as yet, no specific cure for it. Pasteurized milk, pure water and clean food, have made tuberculosis of bone and lymph glands, in children, rare diseases. There is yet much to be done, but the protection against tuberculosis today rests upon education and preventive measures.

OSTEOMYELITIS

The organisms which produce pus get into the children's blood through infected tonsils and adenoids, neglected cavities in teeth, neglected sores on mouth and skin, untreated cuts on hands, feet and limbs. They enter the bone and produce abscesses and sequestra, and lead to crippling from stiff joints and actual destruction of large pieces of bone; even to death from blood-poisoning.

Fortunately, osteomyelitis, rickets and tuberculosis, which were the common causes of crippling when I began the study of medicine in 1890, have largely been controlled, like puerperal fever and blinding ophthalmia of infants, through the definite discoveries in the medical research laboratories of the world, which have led to the science of preventive medicine.

However, the greatest value of these preventive measures has been obtained only by following the example set by Oliver Wendel Holmes, who was one of the first to realize the necessity of, in some way, bringing before the public this correct information, and in seeking ways and means

to keep the entire medical profession informed on all new knowledge and new discoveries in the science of medicine.

INFANTILE PARALYSIS

Now that rickets, tuberculosis and osteomyelitis have been controlled, the chief crippling disease, especially in children, and not infrequently in adults, is due to the entrance of an organism into the nerve cells in the anterior horns of the spinal cord. That is why it is called "anterior poliomyelitis."

Today there is very little control of this often fatal and, with the rarest exceptions, crippling infectious disease. We have no protection against its inroads. It may skip from Vermont to Maryland and from Gibson Island to Gwyn's Falls; from the palace to the hut. It is true that orthopedic surgeons have made tremendous advances in helping the cripple after he is crippled; but preventive medicine is helpless until the cause, prevention and cure have been discovered in the research laboratory.

From my repeated studies of this disease, I am confident that it allows us to present to the public what we need most to control a scourge of this kind:

First, education. Every mother must know that, when a child is ill in any way, it may be the first sign of infantile paralysis. The child will know that it is sick; any adult will recognize the symptoms of its illness; there is always some fever and usually a stomach upset. But these are common in childhood and may be due to many other causes.

The danger of poliomyelitis is greater when there is a prevailing epidemic. To put it tersely, when a child has this crippling infectious disease, it must be recognized within twenty-four hours. A doctor must see the child. Only a doctor can decide whether a lumbar puncture should be made. This simple procedure, in the hands of an expert, is the only way in which infantile paralysis can be recognized in time to prevent crippling and save life. If this test is positive, the child receives a serum obtained from one who has recovered from the disease.

There can be no better argument in favor of selecting a family physician while one is well and sending for him the moment any member of the family is ill. There is always the telephone and there is always

a member of the medical profession near. Rapid transportation is available. There is no better evidence of the danger of applying the so-called "simple" or "domestic" remedies first, or for sending for anyone or getting the aid of anyone who is not a trained and established member of the medical profession. Who else can recognize the symptoms or do the lumbar puncture or obtain and give the convalescent serum? The groups of citizens interested in getting correct information to the people for their protection against disease have never fully realized the value of this evidence, furnished by children crippled by disease, in their educational efforts.

Second, research. Infantile paralysis cannot be controlled until its cause, prevention and cure have been discovered. The already existing research laboratories have neither sufficient means nor workers to hasten this discovery.

INFLUENZA

Apparently we are absolutely unprotected against a recurrence of the pandemic that swept the world in 1918, just before the War ended. It is possible, if there is peace, that the factors of 1918 will not be repeated. But even in the eleven years since that date, there have been other lesser epidemics, and the mortality of influenza and its by-products—pneumonia, bronchitis and septic throat—are on the increase.

There is very little we can tell the people, except to go to bed and send for a doctor when one feels feverish or chilly or has "bone-aches." Keeping the mouth clean and using antiseptics for sprays, apparently give very little protection. The "common cold" is always with us. Even if everyone in the world obeyed the rules of health, we have no evidence how far it would go towards protecting us against influenza.

It would be most satisfactory to see no one spitting anywhere; everyone using paper handkerchiefs, with the distribution of incinerators, so that all such paper handkerchiefs could be burned; to make oral hygiene and hand cleanliness universal; to keep all buildings ventilated and the temperature under seventy degrees in the colder months; to reduce dust to a minimum; to prevent overcrowding and over-work during the winter months. There is no evidence, however, in spite of such an impossible accomplishment, to conclude

that influenza would be so controlled. During that part of the year in which houses must be heated and when the hours of sunlight during the day are reduced, influenza is rampant, except among those who have natural immunity. It is hoped that we will find a toxin-antitoxin, as we have for diphtheria. Then comes the problem of getting all the people protected.

DIPHTHERIA

That we can describe this disease in a few words, means that it is under control. I know what diphtheria was before the advent of the curative antitoxin. In the Children's Hospital in Philadelphia, where I was an intern, eighty percent of the diphtheria cases died in the hospital. My roommate and classmate died there of the disease. Only those of us who possessed natural immunity lived. All of us at intervals had sore throats.

Today we have both the curative serum and the protective serum. Research has won its battle; but the guardians of the people's health have not. The commissioner of health of Baltimore is frequently urging the people, through the press, to have their children receive the toxin-antitoxin for their protection against diphtheria. We are having the same trouble with vaccination against small-pox—133 years since Edward Jenner performed his first vaccination on a country boy! And the same conditions obtain in practically every city in the country.

CANCER

As far as our studies go, the evidence indicates that cancer never begins as cancer, but as something that, at first, is not cancer. If the human being can be taught to recognize that something that is not cancer before it is cancer, and then to seek the help of the medical profession, at least this focus of potential malignant disease should be removed and, in this sense, cancer is a preventable disease. When we study cancer of the skin, the oral cavity, the cervix and uterus and cancer that begins in lumps beneath the skin, but which can be felt with the finger, we have ample evidence that the sore spot in the skin or in the mouth, or the mole, or the nodule, or the lump beneath the skin can be recognized, with the rarest exceptions, in time to effect a positive cure.

Let us take this up in detail, sufficient

to make it clear to the lay mind, in this order: Skin, oral cavity, lumps beneath the skin and the cervix of the uterus.

SKIN

We all believe that even children should be taught how to take care of a little wound. This is called first aid. Children can understand that, when the skin is cut or injured, dirt can get in, and the germs and the dirt can cause a poisoned wound or even blood poisoning. Even the mind of the very young understands what washing is for cleanliness, and brushing the teeth. Therefore, it is not difficult to teach children how to wash a little cut and cover it with a clean piece of gauze or handkerchief until some older and more experienced individual can finish the treatment. Children after eight years of age can understand the danger of stepping on a rusty nail, and that they must have the antitoxin for lockjaw, because the rust on the nail can carry the dirt deep into the flesh and, if there are tetanus germs in the dirt, they will suffer death from lockjaw, unless they receive the antitoxin very quickly. The danger of a wound, then, is that it makes an open door for the possible entrance of dangerous, pus-forming, septic poisoning bacteria, the most deadly of which is the streptococcus.

When one has a sore on the skin and it forms a scab or crust, and one keeps picking at it, this produces an irritation of the normal cells of the skin that are multiplying and growing, in the endeavor to cover the defect and heal the wound. After months or years of such irritation in the open sore, these normal cells of the skin change to cancer, and there begins to grow in this spot a true malignant area. Therefore, if in the proper care of the skin, every wound and irritation is healed by proper treatment, this form of cancer will be prevented.

Years ago this was a very common form of cancer, especially in the unhealed wound after a burn. Today we practically never see a cancer from a burn among enlightened people, nor from any larger wound. What is neglected now are the little scaly areas or minute scabs, called keratoses. A beautiful woman always pays attention to them, and beautiful women never get cancer of this type.

The other dangerous spots on the skin are rough warts, pigmented and non-pig-

mented moles and nodules of any kind. One may be born with them or they may appear later in life. All of them contain cells with a greater potentiality for malignancy than the surrounding skin, and the danger of cancer developing in them, from injury or irritation, is greater than in the surrounding skin.

The most dangerous skin defect or nodule is a *pigmented mole*. When children and grown-ups get and understand this information, they will consult a physician and have all the dangerous kinds of defects removed. This care of the skin of the entire body can and should be taught to children, and to grown-ups who have missed it in the primary schools. When this is accomplished, cancer of the skin will be seen only among those unfortunate individuals who have not received this education. As a matter of fact, today, the incidence of cancer of the skin has been reduced from more than eighty to less than ten percent, in the enlightened group.

The technic of the care of any skin defect, in the stage of any irritation or scab, is almost identical with that of the open fresh cut—wash it with warm water and soap, using cotton; rinse it with medicated alcohol; and cover it with a little vaseline or two percent yellow oxide of mercury ointment.

ORAL CAVITY

The lining of the mouth, extending over the tonsils into the pharynx, is almost identical with the skin. However, in the mouth there are two sources of irritation not present on the skin—the teeth and tobacco in some form. The evidence is so overwhelming that no one can dispute the statement that the chief cause of cancer of the mouth is the repeated irritation from ragged, dirty teeth and tobacco. The change in the lining of the mouth produced by these irritants is at first not cancer, and as a rule there is a long period before cancer develops.

These spots of irritation are of two kinds: A painful area, a little area of irritation, or even a definite sore or ulcer, practically similar to the little spot on the skin with a scab; but the secretions of the mouth prevent scabbing. The other type are distinct elevated areas, like warts or moles. The most frequent is an elevated white spot called leukoplakia. When the individual recognizes the area of irritation

or the sore spot or the white patch at once, stops the use of tobacco in all forms and has the teeth cleaned and smoothed, the area will usually heal, and in this way cancer is prevented. If it has reached the stage of a nodule, like a wart or a mole, it should be removed properly and studied with the microscope.

We must teach children—and set them a good example ourselves—the care of the mouth and teeth, just as we have discussed in the care of the skin. Enlightened women, even when they use tobacco, run less risk than the men in the same social and intellectual group, because women take better care of their teeth, just as they take better care of their skin, and the better the looks of a woman, the better the care she takes of her teeth, and there is no question that there is less cancer of the skin and mouth in women.

Since 1920, and especially since 1925, the incidence of cancer of the mouth and skin, among people who have obtained this information, has been reduced from more than eighty per cent to less than ten, and even now, when we see cancer in these two regions, it is in its earliest stage and usually curable.

The problem, therefore, of preventing cancer of the skin and the oral cavity is the same as the control of diphtheria. In the latter we must teach the parents to bring the children before they are three years of age for the toxin-antitoxin: In the former, we must teach children in the primary schools, and continue it with the adults, the simple care of the skin and oral cavity. We have carried this information to thousands; how can we get it to millions?

LUMPS

Lumps are beneath the skin. They may be buried in the breast or in the thyroid gland; they may be anywhere in the body. On the scalp they are called wen, in the neck, armpit and groin, they are called "kernels" or enlarged glands.

The lumps may be single or multiple. Pain may call our attention to them first, or they may become painful afterwards. No one needs any instruction about feeling lumps, but everyone needs instruction about what to do when a lump is felt. Every lump is a potential cancer. No one but a trained member of the medical profession should decide whether the lump may be left alone and watched, or whether it

should be removed, or first treated by x-rays or radium. Beware of anyone who calls a lump a "kernel" or "bruise." The great majority of lumps, when first felt, are not cancer, and if they are, with the rarest exceptions, they are curable cancer. Thousands of lives would be saved annually, among children and grown-ups, if everyone who felt a lump would seek examination by a doctor at once.

Correct information is the toxin-antitoxin for the prevention of cancer of the skin and oral cavity and in lumps.

In every clinic connected with a hospital today, throughout the world, one can see, sitting side by side, the patients seeking the advice of the clinic for troubles of the skin, mouth and lumps, and they can be divided into the following groups: (1) Enlightened individuals who sought advice at once. In the majority of instances, their trouble is not cancer, or it is the earliest stage of cancer; (2) individuals, enlightened or not enlightened, who have delayed. Here, in the majority of cases, the lesion is cancer, but their chances of a cure are still more than fifty percent; (3) the unenlightened, who have delayed until the chances of a cure are less than ten percent. In the records, up to 1900, group (3) predominates; in the records, since 1925, group (1) predominates.

CERVIX OF THE UTERUS

William Osler was fond of saying that a little albumin and some casts in the urine were valuable to any man or woman, because the knowledge of their presence made them take better care of themselves. The discovery of insulin has so advertised diabetes that ultimately more people should be protected against this disease, because they know the dangers of the excess of sugar and carbohydrates. I hope the same will be true in regard to the danger of cancer of the cervix in the mothers of our children. We know that the greatest protection from this type of cancer is *periodic examination*; and periodic examinations undoubtedly offer the greatest protection against unnecessary and untimely deaths among all individuals over thirty.

It does not seem sufficient to tell women who have borne children that they should seek an examination the moment they observe anything unusual in the monthly periods or their reappearance after the menopause. We hope to control cancer

of the skin and mouth, by providing all expectant mothers with prenatal care, with proper attention during and after the birth of their children and by periodic examinations. There should be no difficulty whatever, in this country, of giving this to both rich and poor. The cost of such protection for all, is less than the cost of the care and the attempt to cure those who delay until cancer has started.

PAIN

Every individual appreciates a sensation which many of us call pain, others "misery" and still others by other names. The abnormal sensation may differ in degree and character, but in every instance it is due to some trauma or irritation of a nerve ending or a nerve fiber, and this message is carried to the brain. Brains of different individuals appreciate messages of this kind differently, and it is common to speak of "sensitive" and "unsensitive" people.

Pain, like an unusual discharge, like a lump, like a sore spot in the skin or mouth, is by no means a message from a serious trouble, nor does it mean the beginning of cancer. But, like any other message, it ought to be interpreted and answered. It is not only polite, but it is a safety precaution. For example, a very intelligent boy came to the clinic with a definite bone tumor in the middle of his thigh. He told us he had seen the doctor the day after he had felt the lump, and his doctor had taken an x-ray picture the same day. But the boy had paid no attention to the pain that he had noticed in his knee for eight weeks. If he had, and the doctor had taken an x-ray picture, a gain of eight weeks would have been made on the disease.

It is important, then, to pay attention to pain, no matter where it is. Beware of anyone who calls pain "rheumatism" or "lumbago" or "growing pains." There is no question that many lives would be saved if more people paid immediate attention to a pain and sought examination at once. As a rule, pain or discomfort of some character draws our attention first to conditions of the bones and joints, and to the stomach and intestines, and to the teeth and jaws.

There is no question that we have made our greatest progress in reducing the incidence of cancer in the mouth, of the skin, of the cervix and in lumps, whether in the

soft parts or in bone, because there is always something to be seen or felt, and what is seen or felt is more tangible to the human mind, and apparently people are less frightened than by the more obscure symptoms of internal cancer.

The x-rays have done more to reveal diseases of bone and internal diseases than has any other diagnostic instrument. There can be no serious disease of bone that will not be seen in the x-ray plate. Very, very rarely is a lesion of the stomach or large bowel overlooked in the x-ray study. The chief difficulty today, in internal cancer, no matter what its symptoms, is delay. The average person is apt to use domestic remedies first, take patent medicine second, and see his doctor as a last resort. Often the medical profession tries simple measures for relief before making what is looked upon as an elaborate and expensive x-ray study. I feel confident that a thorough examination, with x-ray and laboratory studies, if indicated, is the most economic method of curing disease and relieving the mind quickly of anxiety. There should be no difficulty whatever in providing these examinations for everyone, rich or poor.

There is no country in the world where rapid transportation is cheaper, safer or better, and there are very few places in this country which are not readily accessible to hospitals equipped with x-ray and other laboratories.

The effect of education and correct information is wonderfully and clearly shown in the rapid rise in the actual percent of five-year cures of cancer of bone. In 1920 it was about four percent; today it is thirty-five percent. There is no difference in the treatment. The surgery and the radiation are the same. There is but one explanation—patients with pain and swelling near a bone or joint, or with a limp or loss of function, seek an examination with the x-rays at once. As I have stated, we have largely controlled rickets, tuberculosis and osteomyelitis, which cripple but rarely kill, and now we are controlling cancer of the bone. Its full control, of course, depends upon the ultimate discovery of the cause and a preventive or curative treatment.

Progress is slowest in cancer of the stomach. In one of the great clinics in this country, in 1928, the actual percent of

hopeless cancers of the stomach was fifty, but this is an improvement over ninety percent, in 1915.

FEAR

In the beginning of the educational efforts by the medical profession, which led to the formation of the American Society for the Control of Cancer, in 1913, many intelligent people, in and out of the medical profession, were of the opinion, and still are, that this broadcasting of the symptoms of cancer through the press, would increase neurasthenia and cancerophobia. There is no evidence of this. We have undoubtedly created some fear. A little fear the moment anyone is warned, is more apt to hasten the examination. Fear at the end of the disease is of no aid.

Careful statistical studies show that the number of people who delay because of fear, or of those who have cancerophobia, whether they have cancer or not, is not increased by the dissemination of correct information. This was one of the arguments against the beginning of the campaign for the earlier recognition and treatment of tuberculosis, and it has been found to be fallacious.

HIGH COSTS OF MEDICAL CARE

An unusually competent group of scientific men, backed financially by a number of philanthropic foundations, is studying the problem of the costs of medical care. I, of course, have only the evidence of my own experience and my own thoughts.

The cost of hopeless diseases like cancer, to the individual and to the community in which the patients may survive a number of years, during which time every effort is made, regardless of cost, to effect a cure, is very much larger than the cost of an immediate examination of all those who are warned and of periodic examina-

tions. Even if the cost in the latter group were greater, the lives saved would justify the cost.

I am impressed with the fact that the medical profession is slowly and surely reorganizing itself to meet the demands of the enlightened individual who seeks and demands an immediate examination, a thorough and complete examination, and later follows it up with a periodic examination. This group is increasing in numbers. They want their children and themselves to be taught the rules of health, the care of their bodies, and, still more important, they want to be taught the *art of living*, which includes both physical and mental wellbeing. We have done so much for the care of the body that we seem to have neglected the care of the mind. Both need equal consideration and the art of living consists of knowing and doing.

GOOD BUSINESS

Ultimately, every business or profession will be judged as good or bad, depending upon what is good or bad for the people, and the medical profession must bear in mind that the question before it is the control of disease, not necessarily what is best for business.

The people, however, must realize that the ultimate control of many diseases like cancer, influenza, blood poisoning, infantile paralysis, alcoholism, crime and mental disease, depends upon research by a specially trained group, in the laboratories of medical sciences, and this research must be financed by the people, through their representatives and state and federal legislatures. Neither the profession nor the public, today, has appreciated the demand, if they wish full protection against disease, for a greater budget to the existing research laboratories in this country.
904 N. Charles St.

MYSTERY IN MEDICINE

Mystery is the fundamental curse of medicine; evasion and secrecy are criminal. The best way to help any human being is to help him help himself. The man who is evasive in his dealings with his patient is either dishonest or ignorant, or both.—DR. F. B. MOOREHEAD, Bull. Chicago Med. Soc., Dec. 11, 1929.

The Professional Acceptance Company

By GEORGE W. EMMERT, Chicago, Ill.

President, Dental Acceptance Company

INTEREST is increasing in the economic side of the medical and dental professions. This increased interest is gratifying, because interest is the herald of action. No man can do his best work when under the stress and strain of pressing personal obligations. Most people prefer to purchase merchandise from firms of financial strength. This preference, which comes as a direct result of experience with the opposite, trains the layman to prefer the professional services of the individual who is an economic success. Folks gravitate to such a man with a feeling of confidence, often not knowing exactly what attracts them. This bent of human nature is probably responsible for the homely axiom, "Nothing succeeds like success."

Medical and dental schools seem to ignore the economic side of the professional man's training. The individual who uses a profession as a means of livelihood goes into business for himself. It is a business—one of dignity and service, to be sure, but still a business—so long as the individual must depend upon his profession for a living. It scarcely seems proper for a man to launch into business for himself without some semblance of an economic training.

If a young "hopeful," with a penchant for store-keeping, came to you and said: "I want you to invest \$10,000 with me. I'm going to open a store on State Street and sell merchandise to the public. I have had no training in salesmanship; I know nothing about costs; my knowledge of book-keeping is elementary; I never have had any experience with collections; I know nothing about the extending of credit and have no basis for judging credit risks, but I do know that the public wants merchandise and I am ambitious to enter this field," it is scarcely probable that you would invest in such an enterprise or wager much upon the ultimate success of this would-be merchant. Yet this young man has a counterpart in practically every professional man who, upon graduation, goes into practice for himself. What is much worse is the fact that these conditions are painfully consistent in practices which

are hoary with age. As a direct result, the average professional man is not much of a financial success.

The medical division of the Acceptance Company was organized to fit like a keystone into the arch of professional practice and supply those departments which do not exist in the physician's "business," and to conduct which he has had no training nor experience; that is, credits, collections, sales, and finance. It accomplishes this result, with the single exception of salesmanship, which has always been a factor in a professional man's success, as in every other line of endeavor. But this article will fall short of its purpose if it fails to convince a few readers that belief in, and the active application of, the Acceptance Company plan makes salesmanship unnecessary. The basic necessities now are knowledge and hard work. The plan does the rest.

The health of the nation and the mechanics of protecting this health are such a tremendously important business that practically every real thinker today takes an interest in it. News carriers continually disclose articles on this topic by individuals of prominence and importance, from the President of the United States on down. Yet this vital business, so essential to prosperity and happiness, so broad in scope that it affects every one in every walk of life, is conducted without any regard to business principles, the lack of which has caused commercial and economic failure since the beginning of business time. Taken as a whole, here is a stupendous business, in importance second to nothing, conducted rather in spite of, than because of, the economic requirements of the public whom it serves without stint, and yet dependent absolutely upon this same public for economic support.

BASIC ECONOMICS

It is not generally realized that, although we have in this country a tremendous weekly payroll, amounting to \$840,000,000.00, and a tremendous sum in registered savings bank accounts, amounting to \$27,000,000,000.00, still the public income is divided in-

to a great many individual parts. Of the 45,000,000 employed individuals, 80 percent, or 36,000,000, have incomes amounting to \$2,000 a year, or less. What chance has the \$2,000 a year man, with a family to support, ever to accumulate, at one time, sufficient money to pay the average high professional fee? Yet this same individual buys a \$500.00 automobile, and pays for it with comparative ease and convenience.

If a man owes \$200.00, all past due, he will not make a \$20.00 payment each month, because it is his disposition to shun the creditor rather than to go to him with so small a portion of the total indebtedness; but if this same man owes \$200.00, payable in ten \$20.00 instalments, he goes each month to the creditor with a feeling of pride and confidence, because he is meeting his just obligation. To give the individual an opportunity to do this—in other words, to do that which he is able to do—builds his character and his value as a citizen. To keep him continually in the distasteful position of a past-due debtor tears down his character, spoils his reputation for honesty and integrity and certainly does nothing to build up a medical practice. One does not send friends to a creditor.

The professional man extends credit, usually without capital to back up such credit extension, and without the faintest idea of what factors govern the extension of credit. A department store extends credit, on the basis of "charge accounts," only after establishing the credit standing of the individual customer. The professional man extends credit, usually without investigation, and the basis upon which he extends such credit might properly be termed "open accounts." There is a vast difference. In the case of the department store customer there exists a continual desire to purchase additional merchandise. This desire creates a real incentive for the customer to pay the account. In the case of the "open account" this incentive to pay does not exist. Take, for example, the patient who secures a full mouth restoration from a dentist. It may not be necessary to return to the dentist for some years—possibly never. Certainly it is unlikely that he will have occasion to return during the following month. The patient of the physician is frequently in the same position. The incentive to pay is a large factor in the extension of credit, but is only one of many, none of which the professional man is equipped, by experience nor train-

ing, to handle with the essential ease and facility that success demands.

As a matter of fact, not one professional man in a thousand has finances for the extension of credit. It requires capital to extend credit, just as it requires a gold reserve for the United States Government to issue paper money. The extension of credit in professional work is scarcely ever sound, is seldom necessary and certainly does not build up the individual professional practice. On the contrary, the improper extension of credit by the professional man—the existence of a quantity of outstanding obligations among his patients—is one of the quickest ways to tear down a professional practice, whether it be in the dental or the medical field. It is human nature for the past-due debtor to shun the creditor.

These conditions can be remedied. The medium for remedying them is to give the public the opportunity to pay professional fees upon the same conditions and in the same manner as it has repeatedly indicated that it requires for the purchase of high-unit merchandise; that is, the privilege of paying monthly, out of income, and the privilege of establishing a credit standing which entitles them to this consideration.

DEFERRED PAYMENTS

No one has any difficulty in getting an interested audience if he chooses for his subject: "The Present-day High Cost of Medical and Dental Service." The profession is unjustly blamed in this regard, for its members do not receive, by any manner of means, the "lion's share" of the annual sickness bill (the fact that the majority of physicians are usually in financial distress helps to bear this out), but they can be justly indicted for failure to accommodate their practices to public economic requirements. If people are given an opportunity to pay normal fees, on the basis of monthly payments, they will, not only pay such fees, gladly and cheerfully, but by paying them will ultimately reduce the cost of medical and dental service, by distributing the burden over a greater percentage of those to whom the service is rendered. In truth, it is not the high cost of such service that rankles, but the antiquated method of payment.

One of the greatest difficulties which the Acceptance Company has to combat is the feeling of hesitation which the average professional man possesses to discuss ways and

means of payment with the patient, and to tell the patient about the deferred payment plan. The average patient is thoroughly familiar with deferred payments. The professional man can easily, with graciousness and dignity, mention such a plan to the patient and give him the opportunity to take advantage of it.

The average professional man, when he first undertakes to use deferred payments in his practice, has the feeling that such a plan is intended only for poor people—people who are unable to pay—and this obviously is incorrect. The deferred payment plan is intended for those who have credit responsibility. It is a convenience which any professional man can and should offer to the best patients in his practice. If any one doubts that this can be done in a professional manner, without the slightest harm to the dignity and respect of the professional man, he is deceiving himself and withholding from his patients something which it is a well-known fact that from 50 to 75 percent of them would welcome with gratitude and relief.

It is a well known fact in industry that, to succeed, the public must be given what it wants in the way it wants it. Medicine and Dentistry are not different from industry in this respect. These professions must give the public what it needs, and they must supply this service with due regard to the desires and demands of convenience and necessity, if they are to succeed economically. And, if they do not achieve economic success, they and we are likely to live to see the day, and soon, when the State will be compelled to subsidize Medicine and Dentistry. Professional services are a necessity almost approaching food and drink. Build the burden too high, and the public will rebel. If the public rebels, necessity will compel governmental action.

Two driving forces are exerting pressure toward this end and they are entwined like the strands of a rope; the mounting costs of professional attention, and economic distress among members of the profession (the first causes the second). Wholesale and wholehearted sanction and adoption of deferred payments will go a long way toward solving both! Today, the foremost economic experts are full of praise for installment buying. They present a solid front in endorsing its virtues. In a recent issue of the *Saturday Evening Post*, Mr. DuPont says that installment selling has made the prosperity

of the nation. The National City Bank, to which installment credit had for years been anathema, said, in 1925: "Everywhere in the United States, installment buying is leading our people into a morass of debt that will engulf them unless the dangers of the system are brought before them so forcibly that they will resist the temptation to enter into such contracts." But let us quote from a report of this same bank, made only a few months ago, now that "deferred payments" have stood the test of time and depression. This latter report, analyzing the figures of four of the largest financing companies for the first six months of 1930, finds that their record "vindicates the installment system, where carried on in accordance with sound principles and with adequate diversity of risks, from the charge of constituting a weak spot in our economic system."

POSSIBLE DANGERS

It is with some hesitation that I approach a description of the operating plan of the Acceptance Company. The service offered to members of the professions is not yet national in scope. It can only become national as rapidly as the individual members of the profession accept the plan for their financing and use it consistently in their daily practices. In broadcasting this plan we may excite the attention, and frequently the cupidity, of inexperienced individuals who, nevertheless, are ambitious to enter the field of finance. Such individuals are prone to start small local companies, without any knowledge of the hazards which confront both the finance company and, if improperly conducted, the professional man also. Requiring capital, they solicit the interest of members of the profession. Results from activities of this sort are too frequently unhappy and, when the "smoke" finally clears away, we have a condition which makes it almost impossible for the sound Acceptance Company to launch its service in a community where this unfortunate experience has occurred.

This article, up to this point, has largely dealt in generalities—in prefaces which are intended to attract the attention of the reader to a recognition of the basic principles which have been responsible for the growth of the deferred payment idea. Without such recognition and without devoting some thought to this more fundamental side of the question, the individual professional man is prone to consider the deferred pay-

ment plan only in respect to the manner in which it affects him personally and his practice. He fails to see the patient's side of the question. He fails to recognize the necessity, considerably enhanced by present business conditions, for offering the public this solution for the payment of professional fees, and the equal necessity for placing the contracts in the hands of an organization capable of and interested in making the monthly collections promptly and consistently, but always with regard for professional dignity, patient welfare and practice growth.

Perhaps the best way to produce a word-picture of the operating plan of such a company is to reproduce a bulletin recently sent to all members of the medical and dental professions in the cities of Chicago, Detroit, Cleveland, Boston, and Columbus.

FINANCING WITHOUT RISK OR OBLIGATION

"A new era in the payment of professional fees, both dental and medical, is definitely here. The present-day professional economic distress is directly due to antiquated methods of financing.

"Your patients have been educated, by every type of commercial institution, to the convenience of budgeting their expenditures and paying monthly out of income. They expect this consideration, and the professional man who does not accommodate himself to this popular demand finds his practice depleted and such credit as he does extend abused to his embarrassment, while his patients meet every other obligation with a monthly payment.

"If you are cognizant of these facts and prepared to accommodate yourself to this new era, the Acceptance Company will be your personal banker in every sense of the word; render to you a most definite financial service; accomplish for you a regular monthly income; relieve you of financial embarrassment, collections, and extension of credit; and place your practice on a modern business basis.

"Hundreds of practices have been intimately studied, months have been spent experimenting with contracts from various types of patients and, above all, the physician's individual requirements and his welfare have been analyzed, with the result that we have developed a plan for financing without risk or obligation.

"In the use of this banking plan you will encounter three classes of patients, which you must recognize and upon which you must accept our judgment—a judgment based upon experience

with thousands of contracts of all types and the "patient credit" information which we have available to enhance this experience.

"Class No. 1: The patient belonging to this class is a first-grade credit risk. The contract, after being endorsed by you, will be immediately discounted by us and you will receive a check for 85 percent of its face value, the remaining 15 percent being our fee for collecting the monthly payments and advancing the cash to you.

"Class No. 2: The patient belonging to this class is a semi-doubtful credit risk, upon which you will immediately receive 50 percent of the money due you, and the patient will be given time to pay from 3 to 5 instalments, thus demonstrating his ability and willingness to pay. After this probationary period you will receive the balance of your share of the fee, plus interest at 6 percent.

"Class No. 3: The patient belonging to this class is doubtful credit risk, but morally worthy of your service and consideration. Such patients are found in abundance in almost every professional practice. The contract of such a patient we take on a collection basis, making the collections monthly and remitting to you as the money is collected. With the collection facilities available in this banking institution, we can collect from such patients regularly and consistently—from patients who would not pay one cent to you direct.

"The collection of accounts is a business in itself, and without the facilities for handling this business you personally would have no chance to collect from patients in Class No. 3. You can recognize that, with 30 to 40 Class No. 3 patients' contracts in our collection department, you will be receiving from \$300 to \$500 per month without the slightest personal risk or responsibility. Also, you will be receiving 6 percent interest on your fee for the length of time it is outstanding."

The plan briefly outlined in this article is not an experiment. It has been in successful operation in a number of cities for a sufficient period of time to demonstrate its soundness and the valuable and truly necessary service it can render, not only to the members of the medical and dental professions, but also to their patients, who welcome the opportunity to meet their obligations for professional services in the same modern manner by which they take care of most of their other considerable expenditures.

5 S. Wabash Ave.

LISTENING

He who listens with his ears alone, asks foolish questions.

He who listens from within himself, thinks.

He who listens with his spirit, knows

—MARY LEE LAKE

The Structure and Functions of the Nervous System*

(Specialization of Function)

By GEORGE B. LAKE, M.D., Chicago

THERE is a widely prevalent idea that specialization is a development of the last few generations of mankind—that specialists in various lines are something relatively new. But as soon as one begins to study biology, one finds that specialization is as old as animate life—that it is, in fact, one of the basic methods by which the stage of development of any biologic entity can be determined fairly accurately, by the degree to which its various functions are specialized.

When we speak of specialists we are apt to think of workers in various departments of the professions and the more highly developed trades—of surgeons, oculists and neurologists, in the medical profession; of civil lawyers and criminal lawyers; of brick masons and stone masons; and the like. Do we ordinarily consider shoemakers, textile manufacturers, tailors and laundrymen as specialists? And yet, a hundred or two years ago, our progenitors performed all these functions for themselves. The making of shoes, even to the tanning of leather; the weaving of cloth and the fabricating of garments; the washing, bleaching and dyeing, were all performed by each individual family for itself. As civilization develops, specialization increases, and this is part of the process of evolution, because any community of individuals possesses many of the characteristics of biologic entity.

The human body is a community of an enormous number of individuals—the cells—and various kinds of work are assigned to various groups of these individuals. Among these biologic "unions," the structures of the nervous system are, perhaps, the most delicate, complicated and highly specialized.

IRRITABILITY AND CONDUCTIVITY

Among the various activities of the nervous system there are two which are fun-

* This is the first of a series of four elementary articles on the nervous system. The others will appear as space permits.

damental: irritability and conductivity.

In the simplest and most primitive animals, consisting of a single cell, of which the ameba is an example, these two functions, which we consider purely nervous in character, are possessed by the entire body of the creature. The entire surface of the organism is irritable, and the entire cell is conductive. If the ameba is touched, anywhere, with a pointed glass rod, it moves away from the source of stimulation by throwing out a pseudopod on the opposite side, and then flowing over into it. If any part of its surface comes in contact with a particle of material which can be used as food, that fact is at once recognized and a pseudopod is thrown out which surrounds and engulfs the food particle. The whole animal then assumes the functions of a stomach and proceeds to digest the food.

When we get as high in the scale as the sea-anemones, we find that specialization has definitely begun. The animal has developed a skin, to protect it from the vicissitudes of its environment, and a system of contractile cells, corresponding to our muscles, by which it is enabled to perform simple motions.

In order that the contractile cells may receive an incentive to action, there must be some way of conducting stimuli to them from the surface. This is accomplished by the specialization of some of the surface cells to the function of irritability and the development of fibres, specialized for conductivity, connecting them with the cells specialized for contractility. This is the simplest arrangement which can properly be called a nervous system, and then it is not a complete one, even when one comes to the jellyfish, which has a nerve net, possessing the power of transmitting stimuli in all directions, between the irritable cells and the contractile cells. (Fig. 1).

The lowest forms of animal life possessing a complete, primitive nervous system are the true worms, of which the earthworm is an example. In these creatures we find

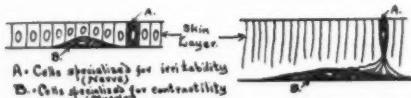


Fig. 1.—Specializing of Cells for Nerve and Muscle.*

the first rudiments of a brain and spinal cord and the complete mechanism for what is known as a *reflex arc*. This arc consists of: (1) an irritable, sensory cell on the surface; (2) a conducting fiber carrying impulses to a central switching-station or "brain," where they are discharged upon (3) a motor or activating cell; and (4) another conducting fiber carrying the motor impulse to the contractile or "muscle" cells and stimulating them to the production of motion. This reflex arc must be thoroughly understood if one is to obtain any adequate idea of the simpler functions of the human nervous system. (Fig. 2).

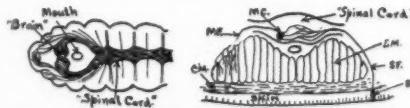


Fig. 2.—Nervous System of Earthworm. MC—Motor Cell; MF—Motor Fiber; SC—Sensory Cell; SF—Sensory Fiber; CM—Circular Muscle; LM—Lengthwise Muscle.

The oldest and most primitive of our present five senses is the sense of touch, for we have seen that it is possessed by animals consisting of only one cell.

As we go a little higher in the scale, we find that this property of irritability becomes specialized in the skin of the lower invertebrate animals, such as the worms. It will not, therefore, seem wholly strange to find that the central nervous system—the brain and spinal cord, with their nerve trunks—is a specialized development from the skin.

DEVELOPMENT OF THE NERVOUS SYSTEM

The embryo of a vertebrate animal consists of three primitive layers or structures known as: (1) the ectoderm, or outer layer, from which are formed the skin and its appendages—hair, teeth, nails, etc.—the mucous membranes of the various openings of the body, parts of certain ductless glands and the nervous system; (2) the mesoderm, or middle layer, giving rise to the bones, muscles, blood and blood vessels, etc.; and (3) the endoderm, or inner layer,

which forms the digestive system, including the liver, pancreas and other digestive glands, the thyroid gland and various other structures.

The nervous system is formed by a folding in of the outer layer along the back of the embryo, so that first a groove and then a canal is formed. This accounts for the fact that the brain and spinal cord have within them spaces containing a clear, watery fluid known as lymph. In the brain these spaces are called ventricles, and, in the spinal cord, the central canal.

The anterior or head end of this nerve tube proceeds to develop in a very complicated manner, as one would expect it to do, seeing that it must form that exceedingly complex structure, the brain. The posterior end is much simpler, giving rise to the spinal cord.

The simple ectodermal structure of the nerve tube soon undergoes a number of interesting changes, whereby it again divides into three types of tissues: (1) the lining membrane of the ventricles of the brain and the central canal of the spinal cord; (2) the connecting or supporting tissue of the nervous system (called neuroglia); and (3) the actual substance of the nerve cells and fibers themselves.

Another step in specialization divides the nerve tissue into two types: the nerve cells and the nerve fibers. Masses of cells, when seen by the naked eye, appear gray; while masses of fibers look white. In the brain, the cellular layer is on the outside (hence, we speak of the "gray matter" in a man's head) and the white fibers are within: In the spinal cord the fibers are outside, making it look white, and the gray, cellular mass is in the center.

The division of function takes another form. The nerves which convey vibrations inward from the irritable cells on the surface, to the brain, where they are interpreted, as sensations, and probably recorded, as a part of memory, are decidedly different from those which convey the vibrations which give rise to motion, secretion and other activities, outward from the brain and spinal cord.

The nerve cells of the mechanism which conveys the vibrations of sensation are not located in the brain or spinal cord at all, but in little bunches, or ganglia, on the posterior roots of the spinal cord, within the spinal canal. From each of these cells, two long, delicate fibers proceed; one going

* All diagrams adapted from Ranson's "Anatomy of the Nervous System."

outward to the surface and the other into the spinal cord, where it passes upward, along the back of the cord, to the back part of the brain, where the centers of sensation are located.

The nerve cells which initiate motion are found in the central gray matter of the spinal cord, and have quite a different structure. These send out one long fiber, to the muscles they control, but they have a number of short fibers by means of which they connect with certain cells in the brain, or with short branches from the nerves of sensation. The reason for this is that the motor nerve cells in the cord do not act on their own initiative, but require a stimulus from the brain or from a sensory nerve to spur them into action. (Fig. 3).



Fig. 3.—Sensory and Motor Neurons.

The nerve cells are still further specialized. We have the pyramidal cells and the cells of Cajal, found only in the cerebral hemispheres, the Purkinje cells, in the cerebellum, and various other special types. These matters are, however, too complicated and technical to be included in a discussion of this type.

Nerve endings are also highly specialized, and something will subsequently be said regarding these.

THE REFLEX ARC

To grasp the idea of the functioning of the central nervous system, one must understand the mechanism of the *reflex arc* which, in its simplest form, is here illustrated. (Fig. 4).

A sensory stimulus, originating in the skin, for example, passes up the sensory fiber SF, to and through the sensory cell SC, and reaches the back part of the spinal cord, where it may pass upward to the brain (to be traced later) or directly to the front part of the gray matter of the cord where the motor cells lie. Here it discharges its energy upon the motor cell MC, through the network N. The motor cell then sends out its impulse through its axis fiber MF, to the muscle, which is caused to contract.

When one touches a hot object and instantly withdraws his hand, without giv-



Fig. 4.—Mechanism of the Reflex Arc.

ing the matter a thought and before actually identifying the sensation as heat or pain, the nervous mechanism involved is this simple reflex arc.

Sometimes a sensory stimulus from one side causes contraction of corresponding muscles on both sides. When this occurs, the connecting neuron, CC carries the impulse across to the motor cells in the other side of the spinal cord. Many of the sensory cells send fibers both up and down the spinal cord, so that this cross-switching may occur at various levels.

If the sensory stimulus travels up the cord to the brain, instead of switching directly to the motor cells, the man will have a chance to think and decide. In such a case, if he decides to respond to the stimulus with a muscular movement (or in case the movement starts from an act of will, rather than because of an external irritation), the impulse travels down from the brain through the fibers so marked, and is switched across to the motor nerve cells when it reaches the proper level in the cord.

The spinal column is composed of twenty-four segments or vertebrae to which should also be added the five segments of the sacrum, which are separate in early childhood, but fuse into one bone in the adult. Between each two vertebrae there are openings through which nerve roots come out from the front and back of the spinal cord. The sensory root from the back and the motor root from the front join, just outside the spinal column, to form a nerve trunk which, of course, contains both sensory and motor fibers. In certain parts of the body, especially in the front of the neck and in front of the sacrum, at the lower end of the spine, these trunks unite and interlace in a very intricate manner, forming what is known as a plexus or network, from which new trunks are derived to supply the arms and legs and adjoining structures.

The various nerve trunks always supply the same areas of the body in all individuals, so that, if a patient has a paralysis, involving motion or sensation, in any part of the

body, a physician who understands the anatomy of the nervous system can readily determine where the trouble is located by tracing the affected nerves to their origin in the spinal cord or the brain.

When a nerve trunk is cut, so that the outer parts of the fibers are separated from the cells to which they belong, the part of the nerve so severed will degenerate and the structures it supplies will be paralyzed for motion and sensation. If the cut ends of the nerve can be brought accurately together and held in that position, delicate fibers will gradually grow out into the severed part of the nerve and, in the course of a number of months, it will become regenerated and resume its functions.

If disease (such as the growth of a tumor) or injury to the spine breaks through or compresses the spinal cord, all the structures supplied by the nerve roots given off below the level of the disease or injury will become paralyzed. If the cord is completely severed it will not regenerate and the patient will die in a relatively short while. If the paralysis is due to compression, by injury or disease, it can be relieved by a surgical operation which will remove the pressure, provided such operation is performed before complete and permanent degeneration of the cord has resulted.

The question of the location of the source of pain is much more complicated, for such a sensation may be produced, not only by irritation of the areas where the ends of the sensory fibers are distributed, but also by pressure or irritation at any point along the course of the nerve trunk involved. When this happens, the pain is referred to the point where the nerve is distributed, and not to the point where the trouble is actually located, because, when the brain normally receives a sensation coming in

over a certain nerve fiber, it is accustomed to refer that sensation to the area of the terminal distribution of that fiber. This is the reason why people who have had a leg amputated frequently complain that their toes are cold and painful. The toes are gone, of course, but the nerve trunk which supplied them becomes pinched in the scar of the stump and the resulting sensations are referred to the original point of distribution of the affected nerve.

Again, pain does not necessarily mean that a nerve is mechanically interfered with in any manner. It may be due to irritation of the nerve by poisonous substances present in the blood, the result of disease or of absorption from the bowels, tonsils, teeth, gall-bladder, etc. In such cases, removal of the cause of the poisoning will relieve the pain.

Nerves, like other structures of the body, are subject to inflammation, and when this occurs the condition is called neuritis. A non-inflammatory condition of a nerve, giving rise to pain, is known as neuralgia.

It will be rather readily understood, from this brief outline, that there are two distinct types of what are commonly called "nervous diseases": those which actually affect the structure or physiologic reactions of the nervous system itself; and those which result from a failure of the so-called higher centers to control the activities of the nervous mechanism. Conditions of the former type require the services of a neurologist and sometimes of a neural surgeon; those of the latter variety are disturbances, not of the nerves, but of the psyche, and require the help of a psychiatrist, to enable the patient to readjust his methods of living and thinking and his reactions to the vicissitudes of life.

700 N. Wabash Ave.

THE GREAT DOCTOR

The great doctor must know almost as much about the social order as the sociologist; almost as much about the mind as the psychologist; as much about the subtle art of counselling as the priest. He must refuse to commercialize his profession and decline to tear his specialism out of the living texture of the medical fabric. He must be able to distinguish between Hippocratic ethics and hypocritic etiquette.—Pres. GLENN FRANK, Univ. of Wisconsin, in Surg. Gynecol. & Obst.

Subarachnoid Hemorrhage with Spinal Fluid Block

(A Case Report)

By R. M. STARR, B.S., M.D., New London, Conn.

THE FOLLOWING history represents an interesting, but fatal, case of subarachnoid hemorrhage with spinal fluid block and urinary suppression, in a man, who, previously, had considered himself in perfect health and without any complaints, and who had never found it necessary to consult a physician for anything other than childhood diseases.

The patient was a man of sixty-one years; a retired officer on a private yacht; married and with no children.

Chief Complaint: Headache and vomiting.

Present Illness: The onset was sudden, on October 7, 1929, at about 9:00 P.M., while sitting in the house conversing with friends, after having partaken of a non-unusual meal. The headache was fronto-parietal and severe, and was accompanied by an "explosive" type of vomiting, followed almost immediately by unconsciousness for one or two minutes, with a slight convulsive seizure and cyanosis.

After the intensity of the attack subsided, the patient walked upstairs to bed, but the headache and vomiting persisted, and considerable weakness of his arms and legs was noted. There was no appreciable dyspnea nor precordial pain reported. He had done nothing unusual during the day, which was occupied in working around his car and the grounds of his house. There was no history of previous similar attacks nor of gastric or circulatory disturbances; no headaches, dizziness nor head noises.

Past History: Usual childhood diseases; there were no operations, nor injuries, and no serious illnesses. He had never found it necessary to consult a physician. On careful questioning, the only significant features were gradually increasing tired feelings and slight shortness of breath on exertion, which had not troubled him until the last few months.

Family History: Irrelevant.

Physical Examination: When examined at home, about an hour after the attack, the following essential findings were noted:

Temperature, 97°F.; pulse, 60; respirations, 18; blood pressure, 236/130. The patient appeared weak, was pale, fully conscious and vomited yellowish, mucoid material, emesis occurring suddenly and with great force. He complained of severe fronto-occipital headache and dizziness. The pupils were equal, regular and reacted to light and accommodation. There was no nystagmus nor other abnormal eye signs. Respirations were shallow, slow and with a regular rhythm, and the lungs showed no abnormal changes. Examination of the heart showed no unusual signs and the pulse was regular, with a strong beat. The radial vessels showed slightly sclerotic walls. There were no changes in tendon reflexes.

Within a few minutes of these observations the following changes took place: Generalized tremors, followed by coma, with tonic convulsions and stertorous breathing; a droop to the right angle of the mouth, cyanosis of the lips; eyeballs rolling from side to side, and the pupils of pin-point size. The right arm was spastic, the left flaccid, but neither was paralyzed. The neck was decidedly stiff.

Following this, Cheyne-Stokes respirations developed and he went into a state of collapse, the blood pressure dropping to 140/100. A diagnosis of subarachnoid hemorrhage was made.

COURSE OF ILLNESS

The patient rallied, somewhat, and the convulsions quieted down after amyl nitrite inhalations and morphine, gr. 1/6 (10 mgm.), with atropine sulphate, gr. 1/100 (0.64 mgm.) by hypodermic injection, followed by 2 cc. of 50-percent magnesium sulphate solution, intramuscularly.

The next day, slight further improvement was noted. He was semi-conscious and was able to take sips of fluids. No evidence of paralysis of the extremities was present. The left arm remained flaccid and the right spastic, with no leg changes.

The following day, October 9, two days after the shock, he was transferred to the

hospital with a temperature of 98°F.; pulse, 100 and regular; respirations, 24; and blood pressure, 200/120. The neck was more stiff and painful to move and his head was held turned to the right. There was absence of tendon reflexes in the legs, but no Babinski sign nor ankle clonus. The tendon reflexes of the arms were sluggish; otherwise conditions remained essentially the same as the day before.

Lumbar puncture was done and the fluid escaped under considerably increased pressure and looked almost like pure blood; 23 cc. were withdrawn, slowly. The red-cell count on the spinal fluid showed 310,000 cells per cu. mm. Examination of the urine showed: Specific gravity, 1.023; albumin, a heavy trace; sugar, negative. The blood-urea was 83 mgm. per 100 cc.; leukocytes, 24,000, with 90 percent polymorphonuclear cells. The blood Wassermann test was negative.

Following removal of the spinal fluid, the patient was brighter and the neck a little less stiff. He was able to take light nourishment. The next day lumbar puncture was repeated and the pressure was much less, but only 19 cc. were obtained. The red-cell count was 220,000. Although his fluid intake was fairly good, his output was extremely low. On October 12, lumbar puncture showed very little fluid coming through, only 5 cc. being obtained; less red than formerly and with a definite xanthochromic appearance; and the red-cell count showing 192,000.

The blood pressure had dropped to 150/106 and the temperature had gradually risen to 103.6°F. He was now growing rapidly worse and there was almost a complete urinary suppression, without retention. The prostate gland was not unusually large. His neck was now rigid. Cheyne-Stokes breathing was present and he was entirely comatose. There was paralysis of his left arm and leg.

On October 13, the blood pressure had fallen to 130/80 and the temperature rose to 107°. At no time in the terminal stages did he have convulsions nor fibrillary muscular twitchings. No signs of pneumonia or cardiac failure were present. He died five days following the original attack.

AUTOPSY FINDINGS

Permission was given for a postmortem examination, and the pathologic findings were limited to the following observations:

Both kidneys showed the same gross pic-

ture, which consisted, essentially, in a slight decrease in size from the normal, in having a slightly irregular, contracted and indented external surface, and in being rather dark in color. The ureters, as well as the pelvis of the kidneys, were normal in size and consistency. On cut section, the capsule was found to strip with slight difficulty, due to the scarring and minute adhesions. The cortex was thinned to about half the usual width. The striations of the medullary substance were quite prominent. Throughout the whole medulla, as well as the cortex, were numerous small, petechial hemorrhages.

The bladder contained but very little, dark-amber urine. No abnormalities were noted in any of the abdominal organs. The lungs showed a moderate degree of congestion at the extreme bases. The size of the heart was at the upper limits of normal and no gross changes were noted in its structure.

On opening the skull, a slight degree of cerebral edema was present, the fluid being of yellowish-red tinge. Extensively, in patches over the external surface of both hemispheres, confined chiefly to the frontotemporal areas, was seen a marked degree of hemorrhage in the subarachnoid spaces. The bulk of the hemorrhage was in the intercerebral areas, apparently from branches of the anterior and middle meningeal vessels. The blood in the fourth ventricle, the aqueduct of Sylvius and the subarachnoid spaces at the base of the skull was firmly clotted and undergoing organization, the process being particularly marked in the *cisterna magna*, thus producing a complete block in the spinal fluid circulation. Cut sections through both hemispheres showed large amounts of bloody fluid in the ventricular system, but it was not clotted in the lateral ventricles. There was no hemorrhage in the internal capsule nor in other parts of the brain substance. No microscopic studies were made in this case.

Anatomical Diagnosis:

- 1.—Subarachnoid hemorrhage, both hemispheres, with spinal fluid block.
- 2.—Acute and chronic nephritis.

COMMENTS

It was not considered advisable to move the patient to the hospital immediately following the shock, for fear of causing further intracranial damage, and the lumbar puncture was therefore not done until two days later, upon his arrival at the hospital.

It was noted that the flow of spinal fluid

was under increased pressure at the first tap and flowed freely, 23 cc. being removed. Following this, a certain degree of improvement took place. However, at subsequent lumbar punctures, less fluid was obtained each time, with a weak flow, and there was no clinical improvement at all, a spinal fluid block being suspected.

Examination of the urine showed a heavy trace of albumin, with moderate numbers of hyaline and granular casts, occasional red blood cells, and the urinary output, in spite of fair fluid intake, was rapidly decreasing. These facts, combined with a high blood nonprotein nitrogen, clearly indicated the possibility of fatal outcome. Under these conditions, a cisterna puncture was not attempted. The obstruction to

the circulation of the cerebrospinal fluid probably started at the foramina of Luschka and Magendie.

This patient illustrates the type of case in which it is stated, in the literature, that subarachnoid hemorrhage, complicated by chronic nephritis, is practically always fatal. In addition to this, there developed acute urinary suppression, making spinal fluid drainage as a therapeutic measure, as well as other forms of treatment, practically useless.

The case is interesting from the standpoint of the great extent of the hemorrhage and the complicating conditions, especially with the opportunity for postmortem examination.

45 Huntington St.



The Prostate Gland*

(Its Most Common Diseases)

By WINFIELD SCOTT PUGH, M.D., New York, N. Y.

IN VIEW of the fact that at least 80 percent of the adult males suffer from disease of the prostate gland, at sometime in their career, it at once becomes a factor of great import in the human economy.

This organ, normally, is about the size of a horse-chestnut, and is located low in the pelvis, surrounding the neck of the bladder. The prostate, however, varies greatly in size from the second to the sixth decade in life. These changes are pretty well defined, so that an intelligent physician can tell at once if he is dealing with an abnormal organ. The prostate is richly supplied with veins. These vessels are often large and tortuous, and frequently found to contain large stones. To give you an idea as to how common these stones are note the following:

In a very large autopsy experience, we have found that almost half of those dying after the age of thirty-five were found to have prostatic vein-stones. They often cause a great deal of trouble and are only detected by the more experienced urinary surgeons.

The prostate is not a urinary organ, but it imparts virility to the male seed. It does this through exuding a substance into the urethra and seminal vesicles. The prostatic fluid is also a carrier for the spermatozoa. It is milky white, of a very penetrating odor and alkaline. Its composition varies greatly and thus furnishes a valuable index in case of prostatic disease.

Inflammation of the prostate, in youth and middle age, is practically always the result of gonorrhea. It is my experience that the prostate is involved in almost every case of gonorrhea. Therefore, as it is estimated that almost 80 percent of the male population acquire that disease, prostatic infection must be a very common malady. We have heard it said that about 15 percent of prostatic inflammation can be traced to sources other than gonorrhea. I will concede this point; but, my own experience, associated with the treatment of over 25,000 cases, I can state positively that I have never seen a prostatic inflammation not due to gonorrhea or sexual irregularity.

SYMPTOMS

When the patient comes for treatment we may see the signs of disease limited

*A clinical lecture at the City Hospital, New York City, June 17, 1930.

to the area of the gland itself, or they may be widely scattered. We usually note that there is a history of gonorrhea or, as some naively call it, a "strain." One of the most common symptoms complained of is an itching in the urethra, with, at times, a feeling of weight in the rectum. Often there is a little difficulty starting the urinary stream and a frequent desire to void.

Only too commonly, our patient complains of "rheumatism." That hackneyed word covers a multitude of sins. The connection between gonorrhea and rheumatism, socalled, has, however, long been recognized. The pain of prostatic disease is often referred to one or two places. The first is in the back, over the kidney region. We are seeing these patients constantly because the "rheumatism" or "lumbago," as it is often called, has refused to respond to treatment. Frequently this pain will simulate that of a kidney stone. Before the days of scientific urology, more than one prostatic patient had his kidney inspected for stone. Another frequent location of prostatic pain is at the coccyx. In the male, this ache spells prostatic disease.

Many obscure pains, which have baffled all attempts to determine their cause, clear up as if by magic when the physician locates the disease, after inserting his finger in the rectum. This is especially true of joint pains and those referred to the legs which, for years, have masked under the name, "sciatica."

Various nervous manifestations, too numerous to mention, have their origin in the prostate gland. These conditions often go on for years without relief, because the patient has been unwilling to admit having had an old gonorrhea. Even the most truthful patient will lead his physician astray. His condition is, at times, accidentally recalled, or the patient in some way comes to the specialist. To the physician, the picture soon becomes clear and he can unfold to the patient the latter's life panorama.

Certainly every adult male, suffering from joint pains or "rheumatism," should have a rectal examination as part of the observation routine. It is no exaggeration when we say that we have cleared up our rheumatic wards, more than once, by treating the prostate.

Sexual incapacity, as the result of prostatic disease, is one of life's great tragedies and is responsible for a very high per-

centage of domestic unhappiness. This is often thinly disguised in the courts by the words "cruelty" or "incompatibility."

The chronic prostatic patient is often very difficult to handle. He is, at times, a sufferer from chronic headaches and is sulky and "queer." Many of our socalled odd characters are undoubtedly sufferers from a chronic prostatic inflammation.

In addition to the foregoing, there is frequently the socalled morning drop. A little pus bead may be present on the pajamas, or the urethra is blocked by a crust. An examination of the urine practically always shows many threads. These filaments are casts of the prostatic ducts.

The physician can almost always make a diagnosis with a little care. He, however, commonly overlooks the inflammation of the seminal vesicles which accompanies it. While this examination may make the diagnosis, the extent of the disease can be determined only by the introduction of a cysto-urethroscope.

TREATMENT

How shall we treat these cases of chronic prostatic inflammation? I say chronic because one seldom sees an acute case, except in association with an early attack of gonorrhea. We have frequently heard it stated that medicines taken by mouth were of no value. Such has always been my opinion. Of late, however, several new drugs have been introduced. They give the patient much relief and have a decided influence on the prostatic infection.

The usual treatment of prostatic inflammation consists in the use of the important antiseptics, such as silver nitrate or similar substances, to fill the bladder. The prostate is then massaged. It is a very slipshod procedure to massage the gland on an empty bladder, as it is conducive to epididymitis. Prostatic massage is often condemned, usually without justice. We only too frequently find that the physician is massaging the prostate when the lesion is elsewhere. Just recently I saw a case of seminal vesiculitis, in which the prostate had been massaged for about two years, but the symptoms still persisted. Treatment directed to the proper organ soon relieved the patient of his suffering.

SURGERY IN PROSTATIC INFLAMMATION

Only recently I heard a prominent surgeon say that operations were never indicated in prostatic inflammation. To this

I must take exception. In my experience, almost 25 percent of those cases require surgical treatment for their ultimate cure. Note that I say *cure*. Alleviation of symptoms is another matter.

The physician who does not recommend a thorough urologic examination, in the presence of a persistent prostatic condition, fails in his duty toward his patient. Many of the lesions which cause a persistence of the disease are polyps, cysts and, at times, definite hypertrophy of some of the glandular tubules—obstruction plus infection. We cannot get rid of the infection unless the obstruction is removed. Chronic prostatitis is definitely a cause of bladder-neck obstruction, and this must be treated surgically.

The polyps and cysts can usually be destroyed by the high-frequency current. The bars are best treated by the Collings electrotome incision. There is a group of cases, where we have irregular glandular swellings projecting into the bladder, that the electrotome will not eradicate. In this group we must open the bladder and remove the masses. Thomas tells us that some cases require removal of the prostate. I have never encountered any in my own practice. Opportunity has been afforded me to see a prostatic removal attempted in such cases. I will simply add that the end results were sad indeed.

Tuberculosis of the prostate gland occurs, at times, as part of a general genito-urinary infection. One frequently hears of tuberculosis being either genital or urinary. In the majority of cases, both systems are involved. Fortunately, this disease is not common here. In post-war Europe it was, indeed, frequent.

PROSTATIC HYPERTROPHY

When a man begins to approach the age of 60, he is quite likely to be annoyed by prostatic hypertrophy or prostatic adenoma. In my experience it attacks about 30 percent of the adult males. Just what this enlargement is has not been determined to the satisfaction of all. One group of investigators believes it is a definite tumor formation; while others claim it to be a long-continued inflammatory action. If it is an adenoma, why does one not meet it more frequently in the autopsy room? In spite of this later statement, one is compelled to admit that the gross specimen does suggest a tumor. What percentage of these cases are cancer? I believe almost 20 per-

cent. These cases are often very deceiving in that, at times, the cancer element is difficult to find. Just as in bladder tumors, one may feel that he has examined the whole mass thoroughly, but cancer cells may be overlooked in a small uninspected portion.

SYMPTOMS

How shall we know that we have a prostatic enlargement?

We find two groups of cases: One, which I shall call the silent prostate, as it produces almost no symptoms until well advanced; the second group I shall call the active. In the latter group, however, the symptom do not appear by any means suddenly. Rather are they insidious in their development. Our patient notices that he is passing his urine a little more frequent than usual. This is particularly so at night. For many years he has seldom gotten up from his bed to void: Now he arises two or more times. Perhaps when he receives the call it is a little urgent. This becomes increasingly more so. Then a little difficulty appears in starting the stream. Complete inability to pass the urine may occur at any time.

Our patient tells us: "Last night I got up to urinate, the room was a little drafty, I caught cold and it has settled in my bladder." We examine the urine and note that it is very foul; infection of the retained urine has, as a rule, taken place. Our patient has to be catheterized. Unfortunately, our process is not all limited to the prostate, for evidence of back-pressure is occurring constantly. We have a distended bladder with, perhaps, a number of diverticula. In automobile parlance these latter would be called "blow-outs." A congenitally weak portion of the bladder gives way under the back-pressure and a sac forms outside the bladder at this point. Continuing, we have distention and dilatation of the ureter and kidney pelvis. The pressure may become so great that a large portion of the kidney substance is destroyed, with great nitrogen retention resulting. Involvement of the heart and blood vessels has undoubtedly taken place by this time.

Every case of prostatic enlargement must be regarded as a definite, individual study. Practically all of these cases will require surgical treatment for their cures, the exact technical procedure depending upon the particular case. The operation is not of so much importance as the pre- and post-operative treatments.

It is outside the scope of this paper to cover such a big subject as treatment. I may say, briefly, however, that, in my opinion, the high prostate is best approached from above; the low prostate is

better treated by the perineal route. All cases should be operated upon under local or spinal anesthesia. Except in very serious cases, my preference is for the latter.

30 East 40th Street



The Medical Aspect of Coffee Drinking

By CHARLES W. GREEN, M.D., New York, N. Y.

THIS writing has no reference to individual observations as to coffee's health effects upon presumably normal persons. In that direction, however, candid judgment compels us to believe that, in sum total, indulgence in this fixed and widespread custom contributes far more to human welfare and happiness than any ill effect therefrom detracts, insofar as the caffeine content is concerned. This premise is made solely because it is the caffeine content of coffee at which the arrows of criticism have been aimed—and unjustifiably so, I think.

Caffein, as a definite medicament, and caffeine, as part of a natural beverage, do not by any means have parallel effects. We know this because many a coffee drinker may be quite free from sleep disturbance following use of his favorite table beverage, yet suffers an irritating insomnia from the mere taking of migraine tablets containing caffeine citrate. Likewise we know that the caffeine content of coffee may disturb, while a similar content, in tea, is innocuous to the same person.

In dictating the regimen, in a case where coffee continuance is debatable, it is well, unless some definite contrary reason exists therefor, that the entire caffeine consideration be subordinated and the deleterious effect of coffee, in an entirely different direction, have the more serious attention it deserves.

THE AROMATIC OILS

That direction is coffee's harmfulness in inducing hepatic insufficiency, and particularly deficiency in biliary flow, with which is so often associated a correlated disturbance of pancreatic function. There is little doubt, in the light of modern understanding of chyle action upon the

duodenal mucosa, in governing the secretin function, that, where a catarrhal or other impediment exists to prompt and plenteous bile flow, such a condition can be made further adverse by a change in the chyle constituents.

That, indeed, is the reason why, in popular parlance, coffee drinking makes some people "bilious." The aromatic, oily constituents of the roasted coffee bean, which are the very things that, by odor and taste, attract us to coffee's use, are the same things which, in cases of partial bile stasis, upset the patient generally, by inducing further laziness in an already lazy situation.

Quite pertinent to this is an adventure in old-fashioned Galenical therapy. When "alteratives" were in vogue, we defined them as medicines which, in some unknown way, restored disordered functioning to normal. It was a convenient way of covering our ignorance in all matters empiric. Now we know that a significant part of such alterative action consisted of a pronounced increase in bile flow, and thus we account for the results which alteratives worked in "spring fever" and other archaic maladies.

CHICORY

Knowing that inhibition of hepatic functioning, from coffee drinking or other dietary cause, finds relief when proper "alterative" means are employed in counteraction, I turned my investigative mind to a phase of coffee drinking which seems to have altogether escaped medical attention. This is the use of chicory in admixture with coffee, which so largely prevails in most parts of Europe and in our South.

In this custom I found at work one of those self-acting or counteracting folk-

cures which humanity so often discovers, without knowing it, and puts into practice, for the same empiric reason that the profession once so generally prescribed alteratives. Users of the mixture—and they are legion—claim that coffee thus made tastes better and agrees with them better.

Be that as it may, the therapy of the situation is this: In making their coffee, those who applaud the chicory mixture mix 10 percent of chicory with their usual ground coffee, the chicory used being the carefully cultivated root of *Cichorium intybus*, which is, in fact, full brother to *taraxacum* (N. F.), the "tonic, diuretic and aperient" of a not-so-long-ago armamentarium. Roasted and ground, this chicory root much resembles coffee in appearance. Unless used in too heavy proportion, which is distasteful, the character of the drink, in its coffee-like aspects and attributes, is really greatly enhanced. It is not a substitute nor adulterant and is not used for any such reason, but is admixed with coffee for the specific reason that it makes the taste and after-effect of coffee more agreeable.

In recognition of this antidotal action of chicory upon coffee's adverse biliary effect, it would seem that the simple procedure of a chicory admixture would very well answer in place of complete coffee restriction, where such restriction might otherwise be advisable, especially as the ground root is fractional in cost, as compared with coffee, and adds no extra

burden of expense nor trouble to the user.

Another striking feature is evidenced clinically in cases where such chicory admixture is used, and it is a subject worthy of further study. Aside from relief from "bilious" distress, the patient very often experiences freedom from such previously existent symptoms as wakefulness. This cannot be due to any perceptible decrease in caffeine intake for, at most, that would be fractional. Nor can we, in any way known to us, attribute an antidotal effect to caffeine from the added *cichorium* element. In fact, careful and extensive research in the direction of ascertaining such antidotal effect, undertaken at the Michigan State College and the University of Michigan, has been wholly negative in its results.

Dismissing the nervous phenomena from consideration, the facts nevertheless existing, though empiric, we may safely conclude that the favorable influences exercised upon the hepatic function as result of chicory admixture with coffee, have a sound physiologic basis.

And as coffee drinking is so very much a part of human happiness to so many who, rightly or otherwise, think so, allowance of the continued use of the beverage, with chicory admixture, rather than forbidding it, becomes a factor in the maintenance of the morale of many, many patients, which must appeal to the humanely skilful practitioner.

60 West Tenth St.

SCIENCE VERSUS ART

Every activity in life has its science and its art.

A person who has studied the science of the violin and who may be able to tell you correctly all about the technic, may get but very indifferent music from the instrument. Another person, who knows little of the science of the instrument, may play tunes that stir the soul.

And so in medicine, dentistry, pharmacy or any business, for that matter. We have those who thoroughly understand the theory but never get anywhere in practice. We have those possessing the art who look down upon anyone who takes time to try to master theory. These artists stand in the way of their own progress.

Those who possess neither science nor art are the tragic failures who have to be carried along by their friends. Those who are born with the art and then, by hard work, master the science, are the ones we find at the top, everywhere.—RALPH R. PATCH.

PHYSICAL THERAPY AND RADIOLOGY

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CANCER AND THE RADIOLOGICAL RESEARCH INSTITUTE

In conjunction with the great dissatisfaction generally expressed concerning the present status of cancer therapy and cancer prevention, one bright spot is recognized by the consensus of expert opinion; namely, the evident influence of radiant energy upon malignant cells.

Gamma rays and x-rays, including the grenz rays of Bucky, have more and more firmly established themselves as remedies of value in malignant disease. Unfortunately they are not specific, since we find that some cancerous tissue will not yield to their influence. Thus we have radio-sensitive and radio-resistant cancers.

In this very fact lies the key to our problem. How can we convert radio-resistant into radio-sensitive cancer cells? Let us recall that well known law of Grotthus, that only that wave length of energy which is absorbed is the one which does the work. Suppose we turn our proposition about and say. What wave lengths of energy will the cancer cells which are called radio-resistant absorb; and, of these, which ones will prove lethal?

Our problem, then, is briefly this:

1.—To discover the wave lengths of electromagnetic energy, no matter where they may lie in the spectrum, which will be absorbed by cancer cells and converted thereby into chemical energy incompatible with cancer cell life.

2.—This will require, first, the discovery of the absorption spectrums of the various types of cancer cells; and, second, the perfection of an apparatus for applying radiant energy of these wave lengths.

3.—We must, at the same time, exclude wave lengths lethal to neighboring healthy tissue cells.

It is with very lively and eager hopes, therefore, that we greet the formation of the Radiological Research Institute.

We especially commend to their very serious consideration electromagnetic energy in other parts of the spectrum besides the gamma, x- and grenz ray regions, inviting their attention to the most interesting and suggestive results reported by Gurwitsch,¹ Reiter and Gabor,² Gosset, Guttmann et al.,³ and of Schereschewsky

and Andervont,⁴ upon plant and animal tumors, as we believe that these other frequencies of electromagnetic energy hold vital secrets, whose disclosure may put the answer to our quest in our hands.

We bespeak for the quest an added zest,

inspired by such a leading and authoritative body as the Radiological Research Institute, and shall expect great things to eventuate in the fight against cancer, conducted under its auspices.

F. T. W.

Electro-Thermic Methods in the Treatment of Lupus Vulgaris

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THE satisfactory service rendered by the surgical electro-thermic methods in the treatment of growths of the skin prompted me to try the same methods for lupus vulgaris. The present communication is a *résumé* of my experience in the treatment of some refractory cases of the last-mentioned disease, which were submitted to me after other methods had failed. Some of the cases had been treated by chemical caustics and, at a later date, by x-rays. Others had been submitted to irradiation by ultraviolet rays. One alone was a "virgin case," no treatment other than expectancy, combined with a little salve, had been administered.

ELECTRO-THERMIC METHODS

In view of the possible unfamiliarity, on the part of the reader, with the electro-thermic methods, some explanatory notes will be given.

1.—"Das Problem der Zellteilung physiologisch Betrachtet"; H. Gurwitsch, Julius Springer, Berlin, 1926.

2.—"Zellteilung und Strahlung"; T. Reiter und D. Gabor, Julius Springer, Berlin, 1928.

3.—"Essais de thérapeutique du 'cancer expérimental des plantes'"; A. Gosset, A. Gutmann, G. Lakovsky and J. Magron. *Comp. Rend. Soc. Biolog.*, August 12, 1924, vol. 91, p. 626 et seq.

4.—"Physiological effects of high frequency currents (electromagnetic fields—Ed.); J. W. Schereschewsky, *Pub. Health Reports*, Sept. 10, 1926, vol. 41 no. 37.

5.—"The action of currents (electromagnetic fields—Ed.) of very high frequency upon tissue cells; (a) upon a transplantable mouse sarcoma; (b) upon a transplantable fowl sarcoma; J. W. Schereschewsky and H. B. Andervont. *Pub. Health Reports*, April, 1928, vol. 48, no. 16.

6.—"Demonstration of electromagnetic wave measurements; J. Henry Hallberg. Therapy with high frequency electromagnetic energy; F. T. Woodbury. *Phys. Therapeutics*, vol. 47, no. 1, January, 1929.

The electro-thermic methods of surgery are those in which electrically-produced heat is employed for the destruction or excision of abnormal tissue. The oldest of these is one in which a platinum loop is heated to redness by means of an electric current. The voltage of the current is very low, but its amperage must be high enough to heat the platinum loop to a visible red heat. The simplest source of such a current is an accumulator. The only purpose of the current is to heat the metal; it plays no other part. If the platinum loop is thrust into tissue the latter is destroyed by the heat derived from the hot metal. But the destruction proceeds only for a very short distance around the metal. This is the case, even if the metal is heated to a bright red. Although the tissue in immediate contact with the metal is actually carbonized by the intense heat, the temperature rapidly drops as the distance from the metal increases. Consequently there is no destruction of tissues for more than a slight distance around the hot platinum loop.

This method of destroying abnormal tissue is quick, and it does not require elaborate apparatus. But it has certain disadvantages. If more than a very small amount of tissue is to be destroyed, the platinum loop has to be reinserted into closely adjoining regions. This means a disturbance of the anatomic continuity of the tissue. There is also the risk of bleeding. Hot tissue gains an increased blood supply, and

the vessels are severed when the platinum loop is inserted. There is also a somewhat severe local reaction if more than a small amount of tissue is destroyed.

There is another electro-thermic method which differs in every way from that described. A special current is passed through the tissue itself, not along a metal loop inserted into the tissue. The amperage of this current must be high enough to heat the tissue to a degree which will cause coagulation. The current must also be deprived of its power to stimulate excitable tissue and to cause chemical (electrolytic) changes in the tissue fluids. This is done by making it alternate (or oscillate) with high frequency. A current that fulfills all these requirements is the well-known diathermy current. When it is passed through the tissues it heats them. When suitable electrodes are employed, the abnormal part can be heated to a temperature high enough to cause its coagulation.

This method, which may be termed *diathermic coagulation*, presents a marked contrast to that which has already been described. The destruction of tissue proceeds for a much greater distance from the electrode in contact with the tissue than is the case when red-hot metal is inserted. There need be no disturbance of the anatomic continuity of the tissue. The temperature need not be higher than that required for coagulation of the tissue proteins, and it does not rise higher than that necessary for boiling the tissue fluids. There is no carbonization of tissues. The small blood vessels and lymphatics are sealed. After the operation, the local reaction is very slight and the general reaction is practically nil. Soft, smooth, non-contracting scars are left.

The third electro-thermic method differs from both of those already described. Heat is employed for the destruction of the abnormal tissue, but is derived from *electric sparks*. A spark represents the passage of electricity through the air, the latter being heated sufficiently to make it incandescent. If sparks fall in rapid succession on tissue, the latter is destroyed by the incandescent air. To destroy tissue in this way the sparks must be thick enough; in other words, there must be a sufficiently thick band of air heated to incandescence. This is secured by raising the amperage of the current. The voltage of the current must be high, because the electricity has to pass across an

air gap. Lastly, the current must oscillate with high frequency, in order to prevent it from stimulating the excitable tissues. A current that fulfills these requirements can be derived from a diathermy machine. The diathermy current can be passed through a device known as a "resonator." This produces a current of higher voltage but of correspondingly reduced amperage. By a method that is described later, the diathermy current can be used without a resonator.

The destruction of tissue by means of sparks is known as "fulguration," by European workers. The term "desiccation," which is applied to it by operators in the United States, is most accurately descriptive, because the action of the sparks is to dry the tissue. The drying is superficial at first but, as the sparks continue to fall, the tissue is dehydrated to a greater depth. At the same time, the tissue on which the sparks fall becomes dryer, harder and darker in color. In this way, tissue can be destroyed for a few millimeters below the surface. If it is desired to destroy it to a greater depth, the dried tissue can be scraped away and the process repeated.

The local reaction, after desiccation, is remarkably slight. After the dried tissue has separated, the scar tissue that fills the cavity is soft and pliable and does not shrink. The cosmetic results are the best obtainable.

The latest of the electro-thermic methods is one in which a high-frequency current is employed for *excising* abnormal tissue. The current is one of relatively low voltage and high amperage. The high-frequency alternations (or oscillations) are described as "sustained." The active electrode, which is applied to the part to be excised, is a narrow blade or needle. After the machine which generates the current is set in operation, the active electrode is brought to the part needing excision. Immediately before it touches the tissue, a minute arc appears between its extremity and the body. If the electrode is introduced into the tissue it does not make absolute contact with the latter, but is separated from it by a thin, film-like arc which is spread out, as it were, over the electrode. If, now, the latter is moved forward, the tissue is divided by the advancing electrode. The divided surfaces separate from each other. On inspection, they are seen to be coagulated. The depth of coagulation can be

regulated, but it is not more than a fraction of a millimeter.

The division of the tissue and the coagulation of the divided surfaces is effected by the arc that surrounds the active electrode. The latter merely guides the arc.

This method is termed the "arc-operation" by German workers. G. A. Wyeth calls it the "operation by the *endothermy knife*." The current is called the "cutting current."

In this electro-thermic method, the active electrode takes the place of a scalpel. It has the great advantage that the minute vessels are sealed as they are severed. Larger vessels bleed, but their divided ends can be quickly sealed by means of the diathermy current. Healing by first intention will take place if the divided surfaces are brought into apposition and sutured.

TECHNIC

The methods I have tried for destroying lupus nodules were the second and third of those described; viz. diathermic coagulation and fulguration (desiccation.) The following are the details of the technic:

For diathermic coagulation, the active electrode was either a small metal ball, three millimeters in diameter, or a simple needle. The latter was, on the whole, more satisfactory, because the depth of coagulation is more under the control of the operator when a needle is inserted than when an electrode is applied to the surface. The indifferent electrode was a metal plate, applied to some convenient part of the body, such as the forearm. If the patient is a child, a general anesthetic is necessary; for adults, a local anesthetic may be used.

To apply fulguration (desiccation), the technic adopted was different from that which is employed in the United States. The patient was placed on a condenser couch, of the type constructed for use with the diathermy machine. In this couch the dielectric is a sheet of ebonite. The patient sits or reclines on it. One of the terminals of the diathermy machine is connected by a cable, either to a plate electrode secured to one of the patient's limbs, or to a metal rod held in the patient's hands. The other terminal is attached, by means of another cable, to a sheet of metal under the ebonite, the metal being smaller in area than the ebonite. The operator holds a pointed metal electrode and brings its free extremity close to the nodule to be treated. Short,

thick sparks pass from the point of the electrode to the nodule. The diathermy machine should be adjusted so that very short sparks pass when the operation is commenced. When the surface is blanched, the sparks should be made a little longer and the desiccation continued until a hard, dried mass, corresponding to the nodule and the closely surrounding healthy tissue, is obtained.

If the patient is an adult, the treatment can be performed without any anesthetic. The dried tissue slowly swells and finally forms a scab which adheres to the body. It drops off in about ten day's time, when healing is complete. This scab constitutes a protective covering and renders unnecessary the application of a dressing. On the other hand, when diathermic coagulation has been practiced, a dressing is necessary in order to protect the ulcer left after the slough has commenced to separate.

All diathermy machines are not equally suitable for work with a condenser couch. With some it is difficult to obtain other than very short sparks. The difficulty, however, could be overcome by introducing inductance coils between the machine and the couch. A box containing suitable coils is now being designed for me by one of the English manufacturers.

In the United States it is the custom, I believe, to derive the sparks from a coil (known as a "resonator"), attached to the diathermy machine. The condenser couch is not used. W. L. Clark, of Philadelphia, is the protagonist of this method.

The two methods of employing sparks for surgical purposes are an example of the difference of procedure, adopted in different countries, in applying what is the same therapeutic agent. It is for the comparison and contrast of different methods that International Conventions play so useful a part.

For the treatment of *lupus nodules*, I have, so far, found that the most generally suitable method is fulguration (desiccation). It is most convenient for the patient, particularly when a large number of nodules have to be treated and frequent visits are necessary; and, as already stated, no anesthetic is necessary for adult patients. On the other hand, it frequently happens that minute portions of *lupus* are seen after the treated area has healed. These residual or recurrent spots can, however, be treated in the same manner. It is an interesting

and important fact that the soft scar left after the initial treatment does not harden nor shrink if it is again subjected to the sparks.

Coagulation of the nodule is less pleasant for the patient. It leaves an ulcer, and healing is less quick than after the other form of treatment. On the other hand, I have found that reappearance or recrudescence is less frequent after diathermic coagulation.

ULTRAVIOLET RAYS

In regard to the permanence of the results following the treatment of lupus nodules by the electro-thermic methods, the following facts were brought to light: It was found that these methods were insufficient, *in themselves*, to effect a real cure. Nodules were treated and residual or recurrent portions were again treated, until the final scars appeared to be free. But, as months went by, it was found that particles of lupus reappeared, either in the scar or in the adjacent skin. It was then decided to subject the entire body, or a considerable part of it, to ultraviolet rays. This additional treatment had the effect of keeping the scars free from reappearance of lupus, or of delaying its return for two or more years.

The case which has been under my care and observation for the longest period (eleven years) had originally been treated by x-rays, and some improvement had been effected. I first applied ultraviolet rays locally (from a tungsten arc lamp), but no visible benefit was obtained. The electro-thermic methods were then utilised, and the nodules were destroyed. Particles of lupus reappeared, however, from time to time; and after a few months it was realized that no real progress was being made. General ultraviolet ray treatment was then instituted, the electro-thermic methods being continued. Further improvement soon began. All the nodules gradually disappeared, and the patient remained free for three years. At the end of this time a small spot of lupus was discerned close by one of the scars. This disappeared after local electro-thermic and general ultraviolet ray treatment.

A case which illustrates the importance of general ultraviolet ray treatment, in addition to local treatment, was that of a small boy for whom all the resources of a dermatologic department had been tried

in vain. Under general anesthesia some of the nodules were treated, some by diathermic coagulation; others by fulguration. After the operation wounds had healed, it was found that there were particles of lupus around each scar. These were similarly treated. As there were numerous nodules it was evident that a great number of operations would be required. But, when general ultraviolet ray treatment was commenced, it was found that the electro-thermic treatment gave quicker and better results. The nodules which had been treated healed more quickly, and some of the scars were found to be free from disease.

The value of general treatment, in addition, to local, is no new discovery. It has been realised for a long time. If, then, general ultraviolet ray treatment is given, the question arises in regard to the value of the electro-thermic methods, as compared with other forms of local treatment. As "counsel for the defense" of the electro-thermic methods I would call attention to the *excellence of the cosmetic results* after treatment by these methods.

Three years ago I received a case in which there were several nodules in the skin of the upper arm. The patient had been under treatment for a number of years. Chemical caustics and x-rays had been employed, from time to time. The skin of the shoulder was scaly, scarred and covered with numerous telangiectases. On compression of the scars, a number of "apple jelly" patches were observed. Around the periphery of the affected area, where the skin was not scarred, there were a number of fresh nodules, varying in diameter from 0.5 to 1.0 centimeter. These were treated by fulguration, and ultraviolet irradiation was commenced. For these nodules only one application of fulguration was necessary. At the present time there are perfectly smooth, soft, unwrinkled scars, and there is no evidence of lupus in or around them.

As stated, the cases treated by the electro-thermic methods had all, save one, been subjected to other forms of therapy before the new methods were tried. They were difficult cases and progress had stopped. If diathermy or fulguration did not cure them, it brought them a stage further towards the desired goal.

In the solitary case, which had received no treatment before the electro-thermic

methods were applied, the scars were found to be free about a year after the first course of treatment but a fresh nodule was found. This was treated in the same way. Seventeen months later, four minute nodules were observed at the periphery of the part originally treated. Similar treatment was administered. Four years later no lupus was

visible. The patient reappeared in 1929, and a new nodule was found. It was treated in the same manner. On no occasion did she receive general ultraviolet ray treatment. If any other nodules appear at a later date the general treatment will be given.

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Clinical Roentgenography of the Colon and Rectum*

By CHARLES J. DRUECK, M.D., Chicago

In presenting this subject, permit me to say I am a surgeon and not a roentgenologist, and therefore view the roentgenogram from its clinical aspect.

An accurate diagnosis is the first requisite to successful treatment, and only by avail- ing ourselves of every diagnostic procedure will our final conclusions become increasingly less controversial. Some of our findings are pathognomonic, while others require assembling, the value of which is in proportion to the intelligence, training, experience and aptitude of the physician.

To elicit the roentgenologic signs of colonic disease, either the barium meal or the opaque enema is applicable, and each method has its advantages. The roentgenologist of today is an expert in the technic of making clear photographs and interpreting them in the light of what he knows about his apparatus and its powers. The interpretation of an x-ray plate is an art that cannot be reduced to the exactness of a mathematical formula. Roentgenography has made radical improvements in the diagnosis of lesions of the gastrointestinal tract as it reveals obstruction to the barium meal, abnormal changes in its rate of passage and transitory or constant deformities in the outline of the colon; but a differential diagnosis, based on pathognomonic roentgenologic evidence, can usually be made in only one disease condition; namely, diverticulosis. (Fig. 1) In all other disturbances, the roentgen-ray will usually reveal evidences of a lesion, but this evidence is, of itself,

insufficient for a histopathologic diagnosis.

The gastrointestinal tract is so complicated a part of man, with its biology and physiology as yet so imperfectly understood, that a roentgenogram showing a slight abnormality, or even definite disturbance, can be accurately and thoroughly diagnosed only by the united study of the roentgenologist and the clinician. The clinician, from his review of the patient's history, the physical examination of the differential functional tests, may see something suspicious on a plate which the roentgenologist has overlooked; or contrariwise, he may be misled by artifacts, adventitious shadows or poor pictures. A consultation between the pathologist and the roentgenologist is, therefore, always essential.

Progress of the barium meal through the colon must be carefully studied fluoroscopically. At six hours it should be found in the ascending or transverse colon, and variations from this time should be noted as an indication of hyperperistalsis or atony. The meal, found only at the ileocecal valve at this time, suggests obstruction here.

At the twenty-four hour period the meal is distributed throughout the colon, sigmoid and rectum. If the large bowel is filled, tonicity, character of haustra, and presence or absence of adhesions are determined. The cecum should be fairly movable and the appendix may be observed. The appendix is not always seen, even though filled, as it may be postcecal and attached by a short mesentery, preventing its manipulation into the line of vision.

* Read before the Chicago Roentgen Society, January 9, 1930.



Fig. 1.—Diverticula of the sigmoid.

The colon is rarely filled sufficiently by the meal to warrant an enema, and the opaque enema is usually needed. By this procedure the colon fills, throughout, in two or three minutes, in the absence of obstruction. The entire colon may then be studied. Roentgenologically, the opaque enema is probably the best method of satisfactorily studying the colon. The dilated cecum or ascending colon, angulations at the hepatic flexure or at the splenic flexure, spasticity, atonicity, partial obstructions, new growths, redundancies, sacculations or diverticula of the colon or sigmoid are thus best visualized. If there is a suspicion of diverticula, the examination must be continued beyond the twenty-four hour period, as long as a portion of the bowel remains filled.

PAIN

Pain is the most frequent subjective symptom which brings the sufferer to consult his physician, and by careful clinical search this subjective evidence of disease can almost be made objective. Often, for example, pressure may elicit pain, or movement may produce it; regardless of the stimulation, the question of the precise nature of the pain, and where and at what times it is experienced, are important factors, and however subjective the pain may be, from the standpoint of the patient, its interpretation always presents, to the physi-

cian, a problem in objective diagnosis. But, in colonic and rectal disease, the character, severity and persistence, or the total absence of pain is often at variance with the other clinical findings. Radiography often assists in explaining the cause of pain, because it reduces the intangible to the tangible.

A number of non-surgical conditions may cause abdominal pain, such as: Acute gastric indigestion; food or ptomaine poisoning; ingestion of poisonous drugs or other substances. Furthermore, conditions above the diaphragm may produce abdominal pain, such as: Pleurisy; pneumonia; pulmonary abscess or infarct; thoracic aneurism; mediastinal inflammation; or neoplasm. It is, therefore, quite obvious that a method which can tangibly account for the pain is a valuable adjunct.

Intestinal diseases often present themselves in an atypical and bizarre manner; occasionally a pain syndrome is absent, or very severe, or exaggerated, according to the patient's individual tolerance. Thus carcinoma of the colon or rectum may be quite advanced before the patient consults his physician because of pain occasioned by the complications of the disease, rather than by the disease itself.

TOPOGRAPHY OF THE COLON

Colonic radiographs offer a fruitful field, explaining many abdominal pains and aches. Anomalies in position of the large bowel are of such frequent occurrence that a diagnosis based on empiric topography is not permissible, because many of these variations are characteristic of the individual's peculiar constitutional make up. The anatomist is interested in form; the clinician is interested in function. Abnormal peritoneal rotation, descent and fixation may occur, making the stereotyped diagnosis of appendicitis a somewhat obscure case; we have all learned that an appendix may be found anywhere in the abdomen, and we may even be dealing with a complete transposition. Therefore, depending on the pain point of McBurney will lead into error.

The normal morphologic and topographic appearance of the colon varies within wide limits, in conformity with the habitus of the individual. The tonus of the colon and abdominal muscles during the examination may influence markedly the position of the colon within the abdominal cavity. At the

first examination, many patients, frightened somewhat by the darkness of the fluoroscopic room and apprehensive over the outcome of the examination, find themselves unable to relax and present a colon, spastic in appearance and situated high in the abdomen. At a subsequent examination, with tonus diminished, the colon may be found much lower and appear more redundant. The colon may be low in the pelvis and function quite well; thus little if any significance can be placed on the position or redundancy of the bowel. Usually the colon is broadest at the cecum narrowing gradually to the sigmoid flexure.

The position of the cecum varies widely. It may lie very low in the pelvis and be obscured by loops of the sigmoid, or, because of congenital malposition, it may lie behind any portion of the bowel and be inaccessible to observation after the enema.

The sigmoid, as a rule, is larger than the descending colon; but many normally functioning colons which, on exploration, prove to be without lesions, do not conform to this description, but are practically uniform in diameter along their entire extent.

The earlier roentgenologic studies of the gastrointestinal tract were begun at a time when the question of ptosis of the abdominal viscera was receiving much attention. Therefore, the earlier investigations were carried on with special reference to form and position, a circumstance which led the medical profession to attach undue importance to the form and position of the colon.

Before the advent of roentgen rays, the normal position of the viscera was largely determined by the study of the dead in the supine position. When the position of these organs was studied by roentgenograms and fluoroscopic examinations, visceroptoses were based on the position found in the living subject, usually standing erect with sixteen or more ounces of barium sulphate mixture in his gastrointestinal tract. In making such studies we must always take these factors into consideration and the force of gravity must not be overlooked. Moody (Moody, R. O.; *Amer. J. Surg.*, 1929, VII, 470, Oct.), in a study of 1,000 University of California students, an equal number of males and females, none of whom had any history of chronic intestinal trouble, chronic constipation or malaise, found that the transverse colon is most often somewhat U or V shaped, with the descending arm on the right and the ascending arm on the

left. The arms are usually unequal in length. The lowest part of the transverse colon occurred as high as the interiliac line in only 8.2 percent of the males and in 1.3 percent of the females. It was found most often in the males between three and four inches below the line and was more than four inches below the line in 3.3 percent of the males and in 4.9 percent of the females, and more than five inches below the line in 16 percent of the males and 21 percent of the females. These low colons have not fallen from the upper regions, but are in their normal positions.

The cecum, which is described as lying in the iliac fossa, seldom has its lower part in the fossa. In 91 percent of the British students, studied by Salmon, the cecum was below the iliac fossa. Its most frequent location was between five and six inches below the interiliac line.

Clinically, the low stomach, low colon, low cecum or other abdominal organ is so common in healthy young adults that we must remember Mills' classification of bodily habitus into the asthenic, hyposthenic, sthenic and hypersthenic types and, of course, the various borderline individuals. Many of the asthenic type carry the stomach and colon low in the pelvis and still maintain good function, and the roentgenologic picture must conform to the bodily habitus.

The low colon is not pathologic in the asthenic or hyposthenic, unless something happens to lower the tonus and thus diminish the rate of motility of the intestinal tract. When this occurs, invalidism results and the patient presents one of the most difficult problems in medicine. These persons tire easily, the habitually low tonus of the digestive tract often becomes still further lowered, and if, at such a period, they partake of heavy or easily fermented foods, the gastrointestinal tract functions very poorly. Even an acute dilatation of the stomach may result, similar to that condition after narcosis.

In pathologic enteroptosis, the patient feels relieved when his abdomen is lifted up by the hands of the physician, and this test shows that the abdominal supporter will do good. Besides this belt, ample nutrition is of great assistance in restoring the patients. That organs not exactly in the position in which the average of great numbers of measurements places them can function in a fairly normal manner, is quite

well known, but how long they will function in this manner is not known.

Bands and adhesions have caused a great deal of discussion since the original work of Lane, the roentgenologic studies of Taylor and the surgical findings of Smith. Roentgenologically there is generally found an unusually long colon, with the abnormal findings confined to the right side. The cecum, the ascending colon or even the terminal ileum may be fixed in such a manner that narrowing or kinking results when the patient is placed in certain positions. Chronic appendicitis, postoperative appendiceal adhesions or congenital bands, similar to Jackson's membrane, are the usual pathologic findings. Actual narrowing or kinking, with proximal stasis, is observed in these patients by means of the x-rays.

Marked displacement of the colon attracts our attention to disease of the extra-intestinal abdominal organs. The differentiation of an intrinsic lesion of the colon from deformities resulting from spasm, gas, fecal accumulations, fecoliths, bone pressure, extrinsic tumors, pregnancy, cysts, ascites, adhesions, congenital bands and adjacent inflammatory process is ordinarily not difficult, if these possibilities are kept in mind. Manipulation and changes in the patient's position are of great aid. Repeated examinations and the use of antispasmodics, in physiologic doses, will often aid materially in such differentiation. Not infrequently, however, intrinsic lesions, such as appendiceal abscess, cecal abscess, actinomycosis, tuberculosis, localized chronic ulcerative colitis and diverticulitis cannot be differentiated roentgenologically from neoplasms.

COLITIS

The contour of the bowel is characterized by a scalloped appearance, resulting from haustral sacculation. Immediately after distention with the enema, this haustration may practically disappear, offering a comparatively smooth outline of the bowel wall, which lends itself admirably for study.

The greatest difficulty is encountered in the examination of the pelvic colon. By close inspection during the filling process, and palpation of accessible portions of the pelvic colon, one can usually observe filling defects, which may later be entirely obscured by redundant loops of the sigmoid.

Chronic colitis gives a peculiar, smooth outline to the colonic shadow, due probably to loss of muscular tone from the chronic inflammatory changes.

In markedly spastic colons the barium may be thinned and exhibit a very ragged-appearing, narrow segment of bowel, which is practically indistinguishable from an organic lesion, although an enema, given in conjunction with antispasmodics, may make a differentiation possible.

With the opaque enema, the entire colon can be filled in from two to ten minutes and it is possible to discover small lesions which would otherwise escape notice. Carman found the ileocecal valve patent in 90 percent of his examinations.

CHRONIC ULCERATIVE COLITIS

Chronic ulcerative colitis is a disease of unknown etiology, characterized by redness, thickening and infiltration of the mucosa of the colon, with subsequent formation of granulation tissue, polypi, pedunculated papillomas, contraction, induration, chronic ulceration and perforation. Usually the disease begins distally and progresses proximally, until it involves the entire colon. The characteristic roentgen-ray finding is a generalized narrowing of the lumen, which may be extreme in places. The contour of the bowel wall appears smooth and unhausterated. In the earlier stages of the disease, when the process is localized, it may simulate stricture, diverticulitis or malignant disease. Rarely, the process may be confined to the proximal colon and be indistinguishable, roentgenologically, from tuberculosis (Carman).

TUBERCULOUS COLITIS

Tuberculous disease of the cecum is accompanied by colonic hypermotility and cecal irritability. It is found that the cecum is unable to tolerate the presence of foreign material and at no point of examination can much of the opaque material be seen in the cecum.

Of thirty-four cases of tuberculous enterocolitis, explored at the Mayo Clinic, the proximal half of the colon was involved in practically all; in two it was found in the sigmoid and rectum. Carman says, "In the presence of pulmonary tuberculosis, evidence of a lesion in the proximal half of the colon justifies the assumption that the colonic lesion is also tuberculosis." Such an inference is, however, not absolute, be-

cause malignant and other ulcerated lesions do occur in the colons of tuberculous subjects. And vice versa, far advanced tuberculosis may be found in individuals in whom no evidence of pulmonary tuberculosis can be seen with the roentgen rays.

Tuberculosis may be superimposed on another disease, such as diverticulitis; and deformity of the cecum, simulating tuberculosis, may result from such other disturbances as cecal and appendiceal abscess, postoperative calcareous ligature defects, congenital or inflammatory adhesion bands and pressure from extrinsic tumors and inflammatory processes. Cecal tuberculosis may be clinically indistinguishable from carcinoma, and a positive diagnosis can be assured only by a histologic examination.

NEOPLASMS OF THE COLON AND RECTUM

Benign tumors of the colon are rare and their roentgenologic differentiation is, in most instances, impossible. In diffuse polyposis and multiple adenomas, there may be irregularity of outline and, after partial emptying or with partial filling and approximation of the walls by palpation, the peculiar, mottled appearance, due to the polypi, may be seen.

Malignant tumors are commonly associated with a palpable mass at the site of the defect in the bowel. The irregularity of contour is produced by intrusion of the new growth into the lumen and by malignant and inflammatory infiltration and ulceration of the bowel wall, resulting in stiffening, inextensibility and spasm. Often the only evidence elicited is complete obstruction to the flow of the clysmal current. The distal end of the barium column is usually seen to terminate in a ragged or conical projection.

The barium meal will reveal the proximal limits of an obstructive lesion of the colon; it will demonstrate the rate of emptying of the bowel; and it may help in visualizing the proximal portions of the colon.

One disadvantage of the barium meal is that, in cases of marked stenosis, acute obstruction may result from its use; another is that, when the colon is apparently normal, as shown by exploration, it may be impossible to demonstrate a well-filled cecum or ascending colon¹; and furthermore,

1.—Erdman, J. F. & Carter, R. F., Malignancies of the Colon; *New York M. J.*, 1922, CXV, June, 649-652.

2.—Carman, R. D. & Fineman S., Roentgenologic diagnosis of disease of the colon; *Radiology*, 1928, I, 129-142.



Fig. 2.—Long redundant loop of the sigmoid colon. Also the ascending colon overlaps the cecum.

the examination conducted without purgation or cleansing of the colon, may reveal pseudo-defects caused by fecal masses.

Little aid is derived from the barium meal examination in lesions of the distal colon, because the barium meal is not retained here by the normal, physiologic, retrograde peristalsis, but is visualized, ordinarily, as a thinned-out strand, frequently broken up into separate segments. Occasionally the gut may appear almost bisected, in places, by the deep haustral sacculations.

REDUNDANCY

Redundancy is most easily demonstrated by the opaque enema, but to determine whether it is producing stasis and, if so, to what extent, a barium meal is necessary. It is seen most often in the distal colon, but it may occur in any segment of the bowel (Fig. 2). Its occurrence at the distal half of the transverse colon may result in the formation of a loop, the elongated portion passing beyond the descending colon before turning upwards to form the splenic flexure.

The loops or kinks formed by the redundant bowel may be large or small. They can generally be smoothed out by manipulation during the fluoroscopic examination, but they immediately relapse.

The sigmoid flexure is a common seat of

redundancy and, at times, so great is the elongation that its highest point reaches to the splenic flexure, making it difficult to distinguish sigmoid from transverse colon.

While redundancy does exist without symptoms, there is no doubt that its presence often gives rise to trouble. Masses in the redundant area may be mistaken for tumor, and it may persist, although the bowels move more or less regularly. Occasionally volvulus is produced.

INTUSSUSCEPTION

Intussusception offers certain uniformity in the roentgen findings. In the adult type, however, the clinical symptoms are definitely those of impending obstruction and the roentgen-ray examination is dispensed with in the urgency for operation. In the subacute and chronic cases, the clinical picture may be somewhat obscure. The progress of the ingested meal is usually normal, the barium reaching the rectum in twenty-four hours, without any apparent obstruction. The cecum and ileocecal valves are displaced and the colon is increased in caliber. The opaque enema frequently reduces the invagination, in part or completely, if the obstruction is recent or loose. This reduction of the intussusception by the enema is, however, no excuse for postponing operation.

DIVERTICULOSIS

Diverticula doubtless occur in many clinically unsuspected cases and are found only after careful roentgen study, particularly in pictures taken after the forty-eight hour examination. They may be found in the ascending colon, sigmoid and rectum, and vary in number from one to several hundred, and in size from two to fifty millimeters or more in diameter. As visualized with the roentgen-rays, they may be variously shaped, but usually appear as round, ovoid, sessile or pedunculated shadows, projecting from the lumen. The roentgen study is of greatest value in this group of cases to reveal associated intestinal stasis, spasm, kinks, narrowing and defective filling of the bowel, along the portion involved. At times there is so much spasm, distortion, inflammation and obstruction, that the diverticula are indistinguishable as such and differentiation from other lesions is impossible. Thus, observation of the colon must be continued, day after

day, until it is empty, to determine the degree and localization of the stasis. The right colon or the right colon and the transverse colon may show a delay of forty-eight to ninety-six hours. Rarely, double lesions, such as carcinoma or tuberculosis, with diverticulitis, are seen.

Roentgenograms, made before the barium is administered, may aid in distinguishing diverticula from the confusing shadows cast by phleboliths, calcified glands and stones in the kidney, ureter, or gall-bladder. Occasionally, both meal and enema may fail to reveal the diverticula. Usually, in these cases, there is a persisting localized spasm, with slight distortion of the bowel, which is not relieved by belladonna.

Megacolon (Hirschsprung's disease) is demonstrable by means of the enema, and the affected bowel is shown in skiagrams as a huge, broad shadow; two or three liters of solution may be necessary to fill the greatly distended gut.

CONSTIPATION

Constipation may be due to various causes and is of several types. Many of these patients present a delayed type of defecation. Although daily bowel movements are obtained, the stools are two to four days delayed. The roentgenographic study here is of inestimable value and is essential in the determination of the time required for the fecal mass to pass through the intestinal tract. The stagnation is usually at the cecum and ascending colon.

Dyschesia, or rectal constipation, is a common condition which, though roentgenologically demonstrable, is often overlooked because sufficient time is not allowed for this valuable differential diagnosis, showing a barium meal packed into the pelvic bowel for days after the upper bowel and colon have been normally emptied.

While we are searching the pelvic bowel for abnormalities, it is well to remember that foreign bodies, alleged to have been swallowed or introduced into the rectum, may lodge in such a position as to escape digital and proctoscopic examination and are recognized only by roentgen plates.

It is only rarely that a rectal lesion can be demonstrated and, when demonstrated, it is generally a well-advanced one. Proctoscopic examinations are of more value than x-ray examinations in diseases of the rectum.

CLINICAL MISCELLANY

The Psychology of Physical Therapy

GOSSIP has more influence in building up a physician's practice than any other factor.

The patient has little or no means of estimating the relative merits of different practitioners, except through hearsay. Gossip makes for the good or ill of most medical reputations. What Mrs. Grundy may say at the Thursday bridge about Dr. Smith may easily bring the good doctor a new \$300 case and may just as easily lose it.

Gossip brings in new patients, but it takes something more to hold them—results, of course; but results are not always immediate. First impressions produced by the silent partners in each doctor's office have tremendous influence. These silent factors are the tools of modern medicine. There was a day when a brilliant but chilling array of knives, scissors and forceps exercised their hypnotic powers in showing that here was a doctor fully prepared to do surgery.

Physical therapy spans the gap between the practice of medicine with drugs and the exclusive practice of surgery. It is accomplishing more than all existing legislation in driving the quack and charlatan from the field of medicine. The physician whose office houses adequate physical therapy equipment is in position to produce effective results by physical means applied on the spot—a combination which counts tremendously in the estimation of the laity. The point is, not that physical therapy will cure any more cases than its sister arts of surgery or medicine, but that it appeals far more to the taste of the patient and, in general, has a greater influence in helping direct the sick man's mind into channels desired by the physician.

It is unbelievable that, in towns and cities supplied with honest and efficient physicians, quacks and charlatans should continue to prosper.

Many cults have a degree of popularity that cannot possibly be founded upon the application of scientific knowledge or upon any particular intelligence in those who

practice them. The appeal that cultists make to those upon whom they practice rests solely in the confidence inspired by a prompt attempt to do something of a physical nature toward the relief of whatever symptoms might exist. The laying on of hands, the various forms of massage, the so-called adjustment are all examples—cases in which some individual is making an effort to help the patient by immediate action. Proof of the powerful attraction of this type of service lies in the continued existence of outlaw practitioners.

Physical therapy affords the ethical physician ample means to alleviate suffering at the psychologic moment, which is when the patient calls for help. The writing of a prescription may eventually produce the same result, but it is deferred action. The use of physical therapy is immediate and infers a degree of personal attention from the physician in whom the patient has placed his confidence. The tremendous popularity of such physical therapy devices as are being advertised to the laity is but another proof of the inborn desire for some definite physical action to counteract or alleviate pain.

Physical therapy rightfully belongs to the medical profession and will eventually be used only under the control of physicians, but not until medical men can give it the same serious thought and study that has been given to *materia medica* and *surgery*.—Editorial, in *Victor News*.

Justice to Dr. Gilmore

IN the brief biography of Dr. W. H. Gilmore, on page 678 of the September CLINICAL MEDICINE AND SURGERY, the statement was made that he had had no time to develop a hobby. This was a gross injustice to him, but was largely his own fault, as he failed to furnish the necessary data.

As a matter of fact, Dr. Gilmore has been (as might have been deduced from his

history) an enthusiastic hobby rider all his life—first one thing and then another. He has a remarkable collection of grand-opera records for the phonograph and is a competent auto-mechanic. His most recent avocation is horticulture—the real thing; not mere gardening.—Editor.

Enemas

Many suffer from flatulence and indigestion because there is a plug of fecal matter blocking the outlet of the intestinal tube. If they could only clear out the last ten inches of the bowel, without upsetting the first twenty feet or more, they would be well.

The commonly expressed fear of enemas is not based on facts. I have never seen anyone injured by them nor have I ever seen such a case demonstrated.

Many persons have such a sensitive colonic mucosa that pure water or soap-suds irritates it a great deal and the patient continues to pass mucus at frequent intervals for two or three hours afterwards. If these persons are taught to add a rounded tablespoonful of salt to the bag full of water, they will rarely experience distress and will

find enemas very helpful.—DR. W. C. ALVAREZ, Rochester, Minn., in *J. Indiana St. Med. Assn.*, Nov., 1929.

Electro-Desiccation Versus Radiotherapy in Skin Cancer

No marked difference was noted in the proportion of cures, failures, relapses and as regards postoperative processes and results, in 53 cases of basal-cell epithelioma, treated by electro-desiccation or by x-rays with curette.—DRS. G. ARCHAMBAULT and A. MARIN, Montreal, in *Canadian M. A. J.*, June, 1930.

Hypertonic Saline Solutions in Infections

It seems logical to conclude that using hypertonic (about $1\frac{1}{2}$ or 2 teaspoonfuls to the pint of hot water) salt solution, as a soak, irrigation or compress for infected tissue, will result in a reversal of flow of tissue fluids into the solution, in accordance with the principles of osmosis, thereby ridding the tissue of bacteria and their liberated toxins, as well as relieving congestion and aiding healing. This has been found true clinically.—DR. K. P. NEAL, Raleigh, N. C., in *Am. J. Surg.*, Apr. 1930.

RECENT ABSTRACTS

Treatment of Flatfoot

Dr. E. Cyriax, in *Brit. J. Actinotherapy*, Mar., 1930, gives the following method of treating flatfoot:

The treatment resolves itself into general and local measures. Concerning the local treatment, there is only one that holds out any prospect of cure; namely, muscular re-education, whose object is to strengthen the weakened muscles until they can, by their own power, correct the flatfoot and maintain it in its corrected position.

Before proceeding with this treatment, existing subluxations must be reduced and adhesions, if present, broken down. The actual re-position of displacements in flatfoot is, in most cases, quite easy and practically painless. Indeed, it can sometimes be effected by the simple process of administering energetic foot flexion, extension, inversion, eversion and circumduction.

If these do not effect reposition, recourse may be had to the following procedure: The structures around the affected joint are to be relaxed by means of sedative manipulations, manual vibrations being specially good for this purpose. One hand of the operator then fixes

the proximal end of the affected joint, while the other hand grasps the distal bone thereof. The latter is first stretched away from the former, in order to separate the opposing articular surfaces, and then moved into position with a sudden jerk. The direction in which this is to be done is the exact opposite of the one in which the displacement has occurred; for example, if the scaphoid be found depressed and rotated downwards and inwards, it must be elevated and simultaneously rotated upwards and outwards.

Local Heat in the Prophylaxis of Syphilis

It has long been known that acute, intercurrent, febrile affections (as well as the experimental clinical induction of fevers) exercise a favorable influence in syphilis, including the external primary, secondary and tertiary lesions.

In a long article in *Urol. and Cut. Rev.*, Feb., 1930, Dr. J. F. A. Bessemans, of Ghent, Belgium, shows that the application of heat by local halneo-thermotherapy, local aerothermotherapy

and local actino-thermotherapy is effective in the treatment of syphilitic lesions in animals (rabbits) and men. The higher the temperature, the shorter is the necessary exposure of the tissues to it. Thus, treponemas become immobile when a syphilitic is raised to a temperature of 42.1°C . (108°F .) for 1 hour; to about 40.3° (104.6°F .) for 2 hours; and to 39.8° (103.6°F .) for 3 hours 20 minutes.

The author suggests that the pyrotherapy of syphilis calls for further experimental and clinical research.

Perineuritis and Arthritis

In *Med. Herald and Phys. Therap.*, Apr., 1930, Dr. Wm. Martin, of Atlantic City, mentions the case of a patient who had been under treatment during 5 years past for a condition that 21 different physicians had diagnosed as arthritis in both knees. However, as roentgenograms did not suggest arthritic pathology in the knee regions, the author suspected nerve involvement, tested for it by the static wave current and verified his suspicion.

The case is, however, considered by the author as one of perineuritis (sciatic), rather than one of true neuritis. The knee condition was probably due to the fact that pain was referred from the lumbosacral plexus and its immediate branches.

The case shows the value of testing all such conditions which are not quite clear with the static wave current, and the futility of depending entirely on x-ray and laboratory tests.

Laryngeal Tuberculosis

Laryngeal tuberculosis is a frequent complication of pulmonary tuberculosis.

In *J. Missouri St. M. A.*, Drs. E. E. Glenn and B. J. McGinnis report their treatment of laryngeal tuberculosis with the water-cooled mercury quartz lamp with laryngeal attachment.

The length of exposure at first is 10 seconds, increasing 5 seconds with every treatment to a maximum of 30 to 45 seconds.

Seventy-seven (77) cases were treated. The average number of treatments was 28.3. In 8 cases there was an apparent arrest of the disease for at least 3 months. In 47 cases there was improvement of both laryngeal and pulmonary symptoms. Out of the 77 cases, 68 (89.6 percent) have been definitely helped, symptomatically, by these treatments. There are no definite contraindications.

The authors feel that this is the most effective method of applying ultraviolet rays to tuberculous lesions of the throat to obtain arrest or symptomatic improvement.

Multiple-Area Intra-Uterine Irradiation

In the opinion of Dr. Wm. L. Brown, of Chicago, as given in *J.A.M.A.*, May 10, 1930, none of the usual methods of applying intra-uterine radium treatment give satisfactory homogeneous, diffuse irradiation. On this account the author has developed an instrument which he terms a multiple-area intra-uterine applicator.

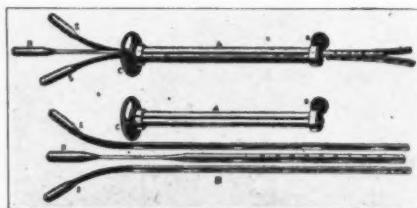


Fig. 1.—Multiple-area intra-uterine radium applicator; *E*, *S*, brass tubes containing radium; *C*, cervical disk; *A*, carrier cylinder; *B*, calibrated carrier.

The instrument (Fig. 1) provides for one, two or three, intra-uterine radium tubes which, by means of flexible stems, calibrated handles and screw arrangement, can be adjusted so that all parts of the uterine cavity are irradiated homogeneously (Fig. 2). The apparatus also permits variation of the dose, at will, for different areas.

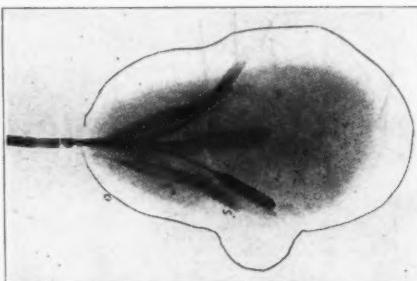


Fig. 2.—Diagrammatic representation of the multiple-area applicator (Dr. Jones's case) with radium tubes at three levels *S'*, *S''*, *S'''*. This picture was printed from three x-ray films superimposed. The tubes *S''* and *S'''* and of the mass, *O*, were outlined with ink, as they were rather dim when the three films were superimposed to make this picture.

There is a reduction in the local tissue injury and destruction at any one point; also a greater total irradiation may be given with a minimum of local and systemic reaction, and large tumor masses may be irradiated successfully.

Physical Therapy of Injuries to Muscles, Joints and Tendons

The indications for physical therapy in injuries to muscles, joints and tendons (whether surgery is employed or not) is to alleviate pain, to promote repair and to restore function.

In *Brit. J. Actinotherapy*, Mar., 1930, Dr. W. C. Douglass asserts that in muscle injuries, after the lapse of 48 hours, where blood vessels have been injured, and immediately, in cases where no blood vessels of importance are involved, the ideal treatment is by diathermy. Such treatment should be carried out daily, with a current of only moderate strength, but with somewhat prolonged sittings (30 to 40 minutes), until the parts are no longer tender on pressure. Massage and graduated passive, and later active, exercises should follow.

Inflammatory conditions of the tendon sheaths (where there is no actual severance) are best treated by applications of diathermy, the part being left at rest, followed, when there is sufficient consolidation, by massage, passive and active movements.

Joint injuries, not involving fractures, should be treated by thorough and prolonged applications of the diathermy current, followed by gentle but efficient massage. The latter must start, if in a limb, at the proximal side of the lesion working gradually downward, though the stroking must be upward. Splints should not be applied, but the part should be kept at rest by adhesive strapping.

The steps necessary in all of the injuries mentioned are: First, by rest and diathermy, to heal the lesion; second, by diathermy and massage, to reduce the effusion and diminish pain; third, to prevent the formation of adhesions by massage and passive movements; finally, to restore function by graduated exercises.

BOOKS

Rawlins: Massage

A TEXTBOOK OF MASSAGE FOR NURSES AND BEGINNERS. By Maude Rawlins, Instructor of Massage to Nurses at St. John's Hospital, Brooklyn; Long Island College Hospital, Brooklyn; St. Mary's Hospital, etc. Illustrated. St. Louis: The C. V. Mosby Company. 1930. Price \$2.00

The author of this textbook is thoroughly experienced in the application and teaching of massage, having been connected with many of the large hospitals in New York City and its vicinity. The various modes and manipulations are described in a clear and definite manner which can only result from thorough familiarity with the subject and, as a descriptive manual to be used in connection with practical instruction, it seems in every way adequate.

Of the 24 chapters which comprise the book, the first 16 are devoted to technic. To the other chapters, however, in which massage is described in relation to definite pathologic conditions, the same criticism may be applied as to other books on this and allied subjects; i. e. it suggests that the masseuse might or should treat certain diseases without direct instructions from a qualified medical practitioner. The masseuse, nurse or other technician has the office of carrying out a therapeutic measure prescribed by a physician and in accordance with his instructions, both as regards kind and degree. It is not the function of a non-professional technician to judge or exercise therapeutics under any other circumstances, except in an emergency.

Griffith & Perlman: Dental Physical Therapy

DENTAL PHYSICAL THERAPY. By R. Allen Griffith, D.D.S., and Theodore H. Perlman D.M.D., Illustrated. Chicago: Physicians Record Co. 1930. Price \$6.00.

While the authors' direct purpose is to show the applications of physical therapeutic agents—especially ultraviolet radiation and diathermy—in dentistry and oral cavity diseases, they consider it essential for their purpose that operators of this therapy should have a thorough knowledge of the scientific bases of these physical methods. Hence a large part of their book is devoted to the physics of light and heat. The various ultraviolet lamps and the d'Arsonval, Tesla and other heat-producing current apparatus are described. The Perlman electrode for applying diathermy in the mouth, the invention of one of the authors, is also described.

The practical part of the book includes the application of the physical therapy agents referred to, in the treatment of pyorrhea, chronic and acute abscesses of dental origin; also miscellaneous conditions arising in the oral cavity treated by fulguration.

This work should be of interest and value to dentists who keep themselves informed of the newer aspects of dental therapeutics.

NEWS NOTES

Radiological Research Institute

A group of representative radiologists, including Dr. Joseph Colt Bloodgood, of Johns Hopkins University, and Dr. Francis Carter Wood, director of the Institute of Cancer Research, Columbia University, has recently united to form the Radiological Research Institute, whose purpose is to undertake an intensive study of the possibilities of radium and x-rays in the treatment of cancer and other diseases and to discover methods by which these agencies, now very costly to the patient, can be produced more cheaply and used more efficiently, so as to bring them within the reach of persons of moderate means.

Funds for this research work have been subscribed by the members of the group, and the Chemical Foundation, which has been such a large factor in modern medical progress, has declared its intention (through its general manager, Wm. W. Buffum) to back the project in every way.

THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (*Surgery*)
GEORGE B. LAKE, M.D. (*Medicine*)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later than the 1st of the month following the appearance of the problem.*

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 8 (SURGICAL)
Presented by Dr. F. W. Schroeder,
Strasburg, Ill.

Recapitulation: A woman of 62 years had had "indigestion," vague abdominal symptoms and slight tenderness all over the belly for some time.

At the time of examination, a tumor the size of a quarter-pound ether can, smooth and movable within a limited area, was outlined at the outer edge of the right rectus muscle, about two inches below the normal location of the gall-bladder. The patient was not cachectic, but felt weak. X-ray study showed nothing definite.

Three days later this tumor had entirely disappeared, the patient promptly regained her strength and has been well ever since (two years).

Requirements What was the nature of this tumor? Why did it disappear?

DISCUSSION BY DR. J. R. SMITH,
WARSAW, Mo.

The history of this case suggests intestinal toxemia. The feeling of general illness, loss of appetite, sluggish bowels (needling senna), and attacks of "indigestion"

point in that direction. General abdominal sensitiveness is also common in intestinal autointoxication, and increases with the degree of the toxemia. The kidneys act normally, but the urine usually shows more or less indican. (No report of this test is offered.)

The tumor described was probably a *fecal bolus* in the ascending or transverse colon or perhaps near the hepatic flexure.

Dr. Schroeder does not describe his "symptomatic treatment," but if the case had been mine I should have given the woman 5 grains of intestinal antiseptic (sodium and calcium sulphocarbolate comp.—sodium, 4 grains; calcium, 1 gr.; with bismuth subsalicylate and menthol) and $\frac{1}{4}$ grain of calomel every 3 hours, followed, the next morning, by a brisk saline laxative. Under such treatment, I should have expected to see the "tumor" disappear.

In cases of this sort there is no adequate substitute for the sulphocarbolates and calomel.

DISCUSSION BY DR. EMIL C. JUNGER,
SOLDIER, IA.

This problem seems a little vague, because of lack of detail, but we can guess, on general principles:

1.—A slim woman has very little fat in the belly to support her organs.

2.—From the location of the tumor it could be a gall-bladder; but she had no jaundice.

3.—She had had some "spells" earlier in life, not so severe because her abdomen was not so unsupported by weakened abdominal muscles, which age and maternity produce.

4.—A quarter-pound ether can and a kidney are the same size and, therefore, this tumor, in my opinion, was a floating kidney which, after wandering about for a few days, decided to return to its normal place until next time.

5.—The weakness and soreness are characteristic of a kidney, disturbed in location and function.

Get this woman fat or put an abdominal supporter on her.

**COMMENTS BY DR. F. W. SCHROEDER,
STRASBURG, ILL.**

In my opinion, this was a omental cyst, and I ruptured it by my rather vigorous, bimanual examination.

Omental cyst is probably never diagnosed, definitely, without opening the abdomen, except when it can be done with considerable exactitude by the process of elimination.

In this case it was necessary to make a differential diagnosis from: (1) A distended gall-bladder; (2) cancer of the pylorus or duodenum; (3) dermoid cyst; (4) floating kidney; (5) ovarian cyst, with a long pedicle; (6) appendicular abscess; (7) mesenteric cyst.

1.—A distended gall-bladder is always accompanied by a train of subjective and objective symptoms, characteristic of some disturbance of the biliary system. These were entirely lacking here. Had a gall-bladder ruptured, to account for the sudden disappearance of the tumor, death would have closed the chapter.

2.—*Cancer of the duodenum* or the pylorus might or might not have been absolutely proven by x-ray study; but a cancer does not disappear suddenly without surgical interference.

3.—A dermoid cyst is fixed to the abdominal wall and is not so movable as an omental cyst. Furthermore, if a dermoid cyst ever ruptured, it would probably reform. I have never known of a dermoid cyst to rupture and can find nothing in medical literature suggesting that it might happen.

4.—A floating kidney usually is attended by symptoms suggesting this condition. Such symptoms were absent in the case in question. Furthermore, kidneys are not in the habit of "floating" down and towards the anterior part of the belly, remaining there sufficiently long and sufficiently fixed to be palpable on repeated and vigorous bi-

manual examinations, only to "float" away, never to be heard of again.

5.—An ovarian cyst in this locality would probably be of much greater size. Also, such a cyst would require a generous pedicle to reach the stated locality and, if it were of the size mentioned (4-ounce ether can), it would be rather freely movable unless it were attached, in which case, had it ruptured, it would not have been the end of the tumor. They generally re-fill and sometimes prove malignant.

Ovarian tumors occasionally do rupture, from force delivered from without or from bodily exertion of the patient. The reasonably fixed tumor in question made it unlikely that it was of ovarian origin.

6.—An appendicular abscess would have caused a demonstration of its own, entirely different from what actually took place.

7.—Drawing the line between a mesenteric and an omental cyst, without looking into the abdomen, must remain an estimate. When the cyst is lower than the umbilicus, one is inclined to call it mesenteric. Furthermore, this type of cyst is frequently dermoid in nature and, if so, is most apt to cause further development of its contents after rupture into the abdomen. This is, of course, just a possibility.

Due to its position, outside of the more common location of a mesenteric cyst; the comparative ease with which it ruptured; its location, immediately below the abdominal wall; and the characteristic ease with which it could be isolated from anything offering resistance, caused the diagnosis of omental cyst to be made; or rather, a diagnosis of cystic tumor of the omentum, to differentiate it from pseudo-cyst of the lesser omentum, which is due to injury or disease of the pancreas, neither of which could be established in this case.

In my study of tumors, during a number of years, I have never found a cause mentioned for the appearance of a cystic tumor of the omentum.

SOLUTION BY DR. MAX THOREK, CHICAGO.

The case of Dr. Schroeder is not of a rare type. While the differential diagnosis, under the circumstances cited, is difficult, many of us will perhaps recall an episode such as Dr. Schroeder has described in our own experiences.

Dr. Smith thinks that the condition was one of fecal impaction. He may be right.

Dr. Junger inclines to the possibility of

a floating kidney. Such may also have been the case.

In the comments of Dr. Schroeder, we find a complete differential diagnosis as to the possibilities that might have caused the clinical manifestations. There are, nevertheless, one or two conditions which might have been responsible for the symptom complex, which Dr. Schroeder and the other discussants have omitted to mention.

In scrutinizing the case from every angle, it is my impression that Dr. Schroeder was possibly dealing with a **phantom tumor**. I may be wrong but, inasmuch as that condition was not discussed as a diagnostic possibility, and having had a case or two of similar type under my observation, I feel justified in dwelling on this particular aspect of the problem.

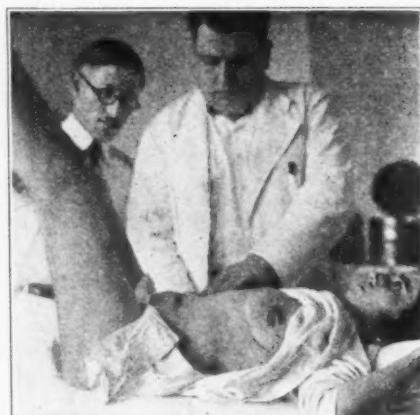
These phantom tumors are usually caused by one of two things: (1) Contraction of the abdominal muscles; and (2) meteorism.

When due to the contraction of the muscles, they usually affect the upper abdominal region and may involve a single muscle, part of a muscle or many muscles. In the case under discussion it seems that, if this was a phantom tumor, the right rectus has been involved.

Gaseous distension, as stated, may also give rise to phantom tumors; it usually affects the lower abdominal section, but may also be found in the upper quadrants. It can readily be seen that these conditions may often cause a great deal of diagnostic difficulty and confusion.

The diagnosis may be facilitated by three maneuvers: —(1) Lay the patient flat on the back, with the lower extremities flexed at a right angle to the body and supported by an assistant, as shown in the illustration. This relaxes the abdominal muscles, palpation is made easier and a diagnosis may be arrived at by this simple procedure; (2) if this fails, place the patient in a hot bath and examine him or her while submerged in the water. The muscles are then relaxed and this may lead to a correct diagnosis; (3) finally, if a phantom tumor is suspected and the simple maneuvers, which I have outlined, are not followed by success, the patient should be placed under an anesthetic and then one may determine correctly the state of affairs.

In emaciated subjects, prolapsed organs or, perhaps, a thickening of the abdominal aorta or a permanent thickening of the ab-



Palpating the abdomen with the lower extremities flexed on the trunk and supported.

dominal muscles, sometimes gives rise to the diagnosis of phantom tumor.

The name "pseudo tumor" is sometimes applied to evanescent manifestations.

When a tumor mass is felt, but is not constant—one day it is here, to-morrow it is gone, to reappear at a time when least expected—the possibility of phantom tumor should be kept in mind.

In the majority of instances, where phantom tumors are observed, the patient is of hysterical make-up or shows other manifestations of instability of the nervous system. Cases are recorded in the literature where phantom tumors were made to disappear under the influence of hypnotic suggestion.

Einhorn reported 42 cases of phantom tumor in the epigastrium and right and left hypochondrium. Of these, 8 were in males and 34 in females. These tumors, in the majority of cases, were floating masses from the size of a hen's egg to that of a man's fist. The tumor described by Dr. Schroeder would fall between the two dimensions noted by Einhorn.

According to the same authority, his phantom tumors were freely pulsating, could always be distinctly felt and, upon light percussion, they yielded a dull sound. The cases that persisted for a long time were caused by prolapse of the left lobe of the liver, exposure and thickening of the abdominal aorta, hypertonic conditions of the abdominal muscles and, probably, adhesions around the stomach.

If the tumor is caused by the prolapse of the left lobe of the liver, it is usually

found in the median line below the ensiform cartilage. It is usually of large size and gives a dull note upon percussion. Between the dullness of the tumor and the ensiform appendix there may be an area of tympanic tone. If the tumor is aortic, it is usually about two inches long, one or two thumbs in thickness and breadth, and pulsating.

Hypertrophic conditions of the abdominal muscles are superficial, horizontal, not globular, and are usually located to one side of the median line.

Taking these facts into consideration, it is my impression that Dr. Schroeder's case was one of phantom tumor, due either to gaseous distension of the bowel or to muscular contraction. Gaseous distension, in this instance, carries greater probabilities.

I am pleased that this problem was presented, not only for its interesting features but also for the opportunity it has given us to review a condition which, because of its infrequency, may escape our attention and be overlooked.

PROBLEM NO. 10 (SURGICAL)

*Submitted by Dr. O. H. Griffith,
Wheeling, W. Va.*

W. R., aged 43 years, was struck by an automobile at 10 P. M., July 10, 1930. He was taken home and walked to the third floor. There was no period of unconsciousness.

He was seen at 8 A.M. next morning, and a slight scalp wound was found, just above the occipital protuberance. His pupils were dilated and reacted slowly to light; aphasia was present, but no bleeding from the nose or ears; knee reflexes were sluggish. The patient was very restless, throwing himself about in bed and trying to get up.

When seen at 6 P.M. the same day, the patient was comatose and very restless; beginning muscular rigidity of the neck, arms and legs were noted.

He was admitted to hospital at 9 P.M., with blood pressure 160/90 mm. Spinal puncture revealed bloody fluid under considerable tension. One hundred (100) cc. of 20-percent dextrose solution was given intravenously. The patient had to be restrained by straps.

July 13, 1930, 50 cc. of 15-percent sodium chloride solution was given intravenously and repeated in 6 hours, using 30 cc. of the same solution. The pupils were still dilated, reacting slowly to light, and rigidity was more pronounced, with positive

Kernig's sign in both legs. An x-ray picture of the skull, taken in two positions, showed no fracture. Coma was more pronounced; respirations, 24; pulse, 120.

The patient died about 7 P.M., July 13, 1930.

Requirement: (1) Diagnosis — What? Where? Why? (2) Suggest treatment which might have saved the patient's life.

COMMENT ON PROBLEM NO. 6

BY DR. G. M. BLECH,
CHICAGO, ILL.

In the discussion of Problem No. 6 (August CLINICAL MEDICINE AND SURGERY, p. 616), I find the statement that, in doing an enterostomy for intestinal obstruction, it is merely necessary to pick up the "first piece or bowel that presents itself." If this is taken literally, the omission of one word (*dilated*) may cause a serious error.

In opening the belly, especially in obstruction following a former operation, a segment of collapsed small intestine is frequently encountered first; and the opening of this would not relieve the condition. We must look for a dilated loop in which to make our incision and, perhaps, establish an artificial anus; and we must remember that, when the knife goes in, fecal matter will gush out, freely and forcibly.

Doubtless Dr. Thorek assumed that every good operator would understand these facts (as they should), but it is always safe to leave no loophole for misunderstandings.

REPLY BY DR. THOREK

I have before me the comment of Dr. G. M. Blech, on Problem No. 6.

After its careful perusal, I wish to reiterate that, in doing an enterostomy, in a case such as is cited in the problem under discussion, "the first piece of bowel that presents itself should be picked up," because, under such conditions, the loops of bowel in the area in which the operation is performed are always distended. I have never found them otherwise. One does not have to "look for" a distended loop; in such cases as this it stares one in the face.

It, therefore, stands to reason that when one is doing an enterostomy, in a case such as Dr. Crack has outlined, one is going to pick up "the first piece of bowel presenting," for that is the distended piece

(Continued on page 775)

THE CLINIC

STOMATOLOGY

Early and Thorough Diagnosis of Mouth Lesions

(Illustrated with Five Case Reports)

By FRANK LUCAS LEWIS, D.D.S., New York City

Department of Oral Surgery, New York University College of Dentistry

THE TENDENCY toward forming lasting and decisive impressions of pathologic phenomena at first sight, while entirely human and instinctive, is, nevertheless, quite unscientific. "Diagnosis at a glance," as we might call it, is either naive, or the result of years of experience. And while most of such "snap" diagnoses come under the former category, many errors of a similar nature crop up in the latter.

In presenting the following cases it is my purpose to show the necessity for exercising continuously a constructive curiosity as we pass along from case to case. Not one of us escapes the magnetic pull which is brought to bear upon our judgment, in this or that diagnostic problem, by what the patient thinks, or by what doctor So-and-So said. In no other phase of the Healing Art is it more essential to stand on one's own feet and see clearly the facts as they are, than in the matter of diagnosis. This is by no means a new idea but, rather, an old one which, like old silverware, gleams more brightly with each polishing.

Let us examine a comparatively simple case: Mrs. W., aged 50, has presented herself asking that a visible lower right

bicuspid root be removed. In the course of our conversation she relates that her physician thinks that she is harboring a focal infection, and that this obvious focus is a predisposing factor in causing an unsightly facial eruption. True, the root in question is bad and should come out. However, a radiographic study of all the teeth is advised and most of the teeth are found

to be normal. But in the same film (Fig. 1) are seen, in addition to the bicuspid root, two non-vital molar roots, of which the patient had no knowledge. This needs no further comment.

In introducing the second case it may be well to remark that a great number of dentists, and also many physicians, question the necessity for a complete radiographic examination of the oral structures, prior to either constructive or destructive measures. To me such examination and treatment are, indeed, Siamese twins: They cannot be separated.

Mr. M., aged 55, presents himself for the removal of a lower molar. The side of his jaw has been "grumbling" for some time, he says. (As indicated above, many so-called "specialists in extraction" remove teeth without first radiographing). An in-



Fig. 1.—Showing clinically obvious bicuspid root, and also buried molar roots.

traoral x-ray film of the area in question (Fig. 2) shows unusual radiolucence beneath the teeth. This calls for a large picture. The lateral plate tells its own story—an enormous dental root cyst or adamantinoma is present. Imagine, if you can, the outcome of this case, had it not been submitted to thorough examination.

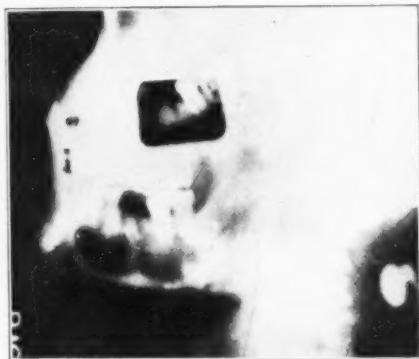


FIG. 2.—Showing small film of first molar area superimposed upon lateral plate which discloses multiple cysts.

Mr. S., aged 32, complains of pain and swelling under the tongue, a feeling of fever and malaise. The patient was confined to bed with a tentative diagnosis, by the general surgeons, of Ludwig's angina.

Clinically, the floor of the mouth was raised and tender, with abscess symptoms under the tongue—redness, swelling, pain, fluctuation—all localized at the right anterior base. The man's temperature was 101°, 102° and 103°F., on three successive days of examination, with soreness and swelling increasing. (This was a clinic case, consequently the routine of examination was considerably slower than that in office practice).

Radiographic study solved the problem. A large bite plate, covering the entire sublingual area, including the last molars, showed nothing. However, lateral plates of the mandible and posterior sublingual structures (Fig. 3) disclose two large calculi in the submaxillary gland. These pictures were checked with small intraoral films, to show that the foreign bodies were not in either side of the mandible, but in the intervening soft structures. Treatment here for "Ludwig's angina" (this term is often loosely used) would have done little good.



FIG. 3.—Showing two large calculi in the submaxillary gland, deeply imbedded under the tongue.

The following presentation will be recognized as typical of dental cases encountered in the general practice of both Medicine and Dentistry. Because of its outcome, it will be interesting to give a few details of the case history.

Mrs. K., aged 30, married five years, has a two-year-old son. Her life, for the past ten years, has been normal, and her general activities are of only average interest. Shortly after the birth of her baby, however, she complained of a feeling of apathy. Incidentally, details of her delivery and post-partum recovery suggest a normal condition throughout. Then increasing malaise developed, the patient became tired quickly and began to be conscious of "nerves." Over the ensuing period of eighteen months these symptoms gradually became more marked. She consulted her physician, who gave her a thorough physical examination (excluding the teeth). His treatment consisted of intravenous injections of iron and arsenic. These injections seemed to give the patient a temporary boost, as it were; but soon she slipped back into the old rut.

The previous symptoms found their climax in a violent ear-ache, which developed overnight. This was followed by the perception of "black spots" before the left eye. There was also a spasmodic facial neuralgia on the left side. All these things combined to make this poor woman highly neurotic, and, at times, hysterical. Examination of the ear, by the way, showed not even inflammation.

The neuralgic pains drove the patient to her dentist, who summarily extracted the upper wisdom tooth on that side. He reasoned that the tooth was useless anyway, and that it might be the cause of the



Fig. 4.—Showing rarefied areas at apices of the lower molar.

trouble. As the symptoms did not subside, but rather became more aggravated he requested a complete radiographic study of the mouth. This examination disclosed one chronic abscess on the opposite side of the face, as well as an acute apical disturbance on the lower left (Fig. 4), immediately over the inferior dental nerve.

Removal of these offenders, especially the acute one, brought about an immediate change in this patient's attitude. She remarked at once that there was a relaxation of the entire left side of her face. One month after the operation, the lady reports "a new lease on life," with a gain of several pounds in weight.

From all of this there emerges, like an iceberg out of the foggy spring ocean, the question: Why was not the woman's mouth examined at the start of her illness? The lesions found were of long standing. The acutely diseased molar, under the lower bridge was extensively carious and consequently non-vital and infected. If it had not been for the pain caused by the irritation to the main trunk of the mandibular nerve, this patient would doubtless still be "going down hill."

The fifth case which I wish to present constitutes the strongest piece of evidence, in my meagre experience, in favor of early and thorough diagnosis. Its illustrative power, you will agree, lies in the fact that, apparently, the consequences of improper diagnosis were eventually fatal.

The patient, a negro girl, aged 19, presented herself at the Bellevue Hospital Surgical Clinic for treatment of an immense tumor of the maxilla (Fig. 5). My complete report of this case will be found in the *American Journal of Stomatology*, Vol. III, No. 3.

Sketching the history, the girl told of an "operation" some eight or ten years previously, by her dentist down South, when the growth was only the size of a walnut. Following this operative work, the neoplasm continued to proliferate until it reached the size at which you see it—larger than an average man's fist.

Radiographic examination showed encroachment upon vital structures, which rendered the mass practically inoperable. However, partial removal was attempted, and radium needles were implanted to discourage regrowth. Microscopic examination of the tissue brought a diagnosis of osteo-



Fig. 5.—Showing tumor ten years after original operation.

fibroma (non-malignant). Unfortunately the radium was ineffective. The cells continued to grow. A second operation was done recently, but this time the patient never awoke from her anesthetic slumbers.

With the microscopic diagnosis of osteofibroma in mind, is it not reasonable to believe that similar diagnostic findings, when the growth was small and consequently operable, would have made possible a more thorough understanding of the operative requirements of the case? Ten years ago, a radical resection of the left maxilla would, probably, have removed all traces of the then-incipient tumor.

In reviewing these five cases, our conclusions will be:

- 1.—That diagnosis is a very important part of our work.

2.—That microscopic and radiographic examinations are invaluable in a large majority of oral cases, radiographs being imperative.

3.—That only the facts of each case deserve attention.

4.—That early and thorough diagnosis, in oral conditions, should save much human suffering.

The foregoing reports, of course, arise from errors of omission and commission in

the matter of diagnosis, but their presentation is, indeed, "with malice toward none, with charity for all." None of us escapes an occasional slip in this most important field of our work. However, it is hoped that these illustrations may be transformed from the stumbling blocks of the past into the stepping stones for the future.

1 Greenridge Ave.,
White Plains, N. Y.

SEMINAR

(Continued from page 771)

which one will utilize for the artificial stoma.

One must keep in mind the difference between an enterostomy as an operation of necessity, and the formation of an artificial anus in a case of subacute or chronic intestinal obstruction. Dr. Crack's case was an operation of necessity. Dr. Blech was, apparently, thinking of an operation for the chronic type of obstruction.

Further on the Doctor states, "We must remember that, when the knife goes in,

fecal matter will gush out, freely and forcibly." No competent surgeon would permit, in doing an enterostomy, "fecal matter to gush out, freely and forcibly." On the contrary, in doing an emergency enterostomy, not even a microscopic particle of fecal matter should be permitted to escape from the bowel.

I like Dr. Blech. I appreciate his versatility. I have known him for thirty years, and during that time we have had many discussions, which were always of a friendly nature.

PERSONAL SERVICE

The physician must realize that the patient desires and requires personal attention; that he desires active treatment and is disappointed when he receives only diagnosis. Small wonder, therefore, that the cultists flourish. Although based on wrong theories, mental suggestion or physical manipulation, even when practiced by the quack, may be really beneficial. The physician should study these methods and should apply them in the care of certain patients. He will do this with less revolt when he remembers that mental suggestion, manipulation and hydrotherapy have been accepted forms of medical treatment since the days of the early Greek physicians. There is, obviously, nothing new under the sun. The ultimate survival of the private practitioner will depend largely on a realization by the profession of the patient's demand for personal service and that the art of medicine is, in its very essence, completely personal.—DR. JAMES D. HEARD, in J.A.M.A., May 31, 1930.

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

Notes from the British Medical Association

THE 98th annual meeting of the British Medical Association was held in Winnipeg, Canada, August 26 to 29, inclusive, 1930. This is the third time the Association has met in Canada (at Montreal, in 1897, and at Toronto, in 1906, were the previous Canadian meetings).

Many visitors from Great Britain and the other Colonies, were present, as well as a good number from the United States, and the whole affair seems to have been colorful, inspiring and instructive.

Two of our readers who attended this meeting were thoughtful enough to send us some notes, which we present herewith:

On the special British Medical Association train, going up to Winnipeg, I met a rather celebrated London gynecologist, who takes no stock in J. E. R. McDonagh's work (in which I am so deeply interested) and classifies him as a fanatic, whose ideas are not accepted by his professional brethren.

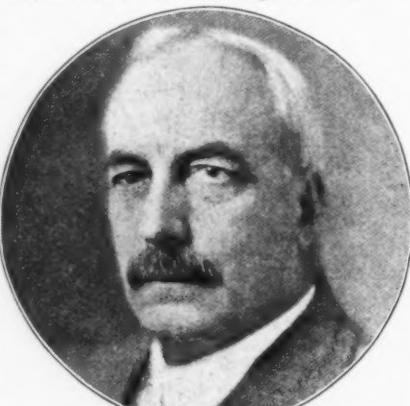
On the other hand, three other London physicians spoke well of McDonagh's hypotheses, but felt that his writings are hard

to follow and difficult to understand. When I told them of my personal experiences with these matters they were interested and felt that they had been overlooking something worth while.

Lord Dawson of Penn, the King's physician, spoke pleasantly of McDonagh, but said he could not accept these revolutionary ideas without reservations. He has used Sup 36 successfully, but has had no particular results with the other remedies McDonagh suggests.

Our brethren from across the sea seem to give little thought to their personal appearance (many wore home-spun or khaki hunting suits), but they know their business and discuss it with joy and intelligence; are courteous to the limit and will go to any length to do one a favor; are interested in all sports; study and work hard; and respect and obey the laws of their country.

On the whole, I feel that my contact with these British physicians was well worth the trip. It strikes me, also, that McDonagh may be another prophet who is not without honor except in his own country. I shall



W. Harvey Smith, M.A., M.D., C.M., Winnipeg,
President Elect of the British and Canadian Medical
Associations.



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Lord Dawson of Penn, personal physician to King George of England, with Lady Dawson (left) and their daughter, attending the meeting of the British Medical Association at Winnipeg, Canada.

go on with my work, but shall check all results more carefully.

The meeting itself was quite different from those we are accustomed to in the United States. Some of the papers read were excellent—one especially, by Dr. Parkinson, on coronary disease, was outstanding—while others were of no practical value. Much time was spent in banquets, teas, pageants and other entertainments.

NORMAN M. SMITH, M.D.

Minneapolis, Minn.

—

I have had a very interesting week at Winnipeg, attending the meeting of the British Medical Association.

As might be expected, their way of conducting a meeting is quite different from the proceedings of the A. M. A.

The thing that struck me particularly (being a stranger to almost everybody there) was that it is much more difficult to become acquainted with these British doctors than it is with the men one encounters at medical meetings in the United States. I am convinced that this is not due to any feeling of unfriendliness, but to their possession of that element of reticence which is largely lacking in our so-called Americans.

On Wednesday morning, Aug. 27, I heard an address on coronary thrombosis that was, in itself, worth making the trip to hear.

EMMET KEATING, M.D.

Chicago, Ill.

Probable Cause of Jamaica Ginger Paralysis

A PECULIAR form of paralysis, perhaps unlike anything ever known before, has recently afflicted a relatively large proportion of the population throughout some of the Midwestern and Southwestern States. Definite figures on the extent of the disease are not available, but it is certain that the numbers run into the thousands.

At the request of the state health authorities of several states, the United States Public Health Service undertook studies of this condition. The investigations made in some of the stricken areas in Ohio and Tennessee seem to confirm the widespread rumor that the disease is closely associated with the drinking of an adulterated fluid extract of ginger. That it could not be due to the ginger as such became clearly evident from the fact that many of the victims, when questioned, freely admitted having used similar preparations for beverage purposes for from one to five years, with no other effects than those derived from the alcohol. It soon became evident, therefore, that the condition must have resulted from some unknown poison or from some known poison whose action was so altered, through the ginger or the alcohol, as to render it unrecognizable; which poison in some way got into a manufactured lot of so-called fluid extract of ginger at a relatively recent date.

The possibility of some known or only partially known poison, with its properties so altered as to produce a condition in man heretofore virtually unknown, must be considered. From the very nature of the problem it would seem not improbable that the suspected ginger contained some denaturant, since denatured alcohol might very well have been, and probably was, used in the manufacture of some of the ginger extract, or that it contained some adulterant, since it is known with certainty that adulterants of various kinds have been used for some years in the manufacture of this preparation. The studies conducted by the Public Health Service, though by no means complete, seem to indicate that the latter explanation appears to be the correct one, though the mechanism of the suspected adulterant is as yet not clear.

The exact nature of the pharmacology of

the compound which has been found uniformly present in suspected ginger and absent in unsuspected ginger is as yet unknown. From its chemical behavior it appears to resemble a phosphoric acid ester of tricresol, which in itself does not appear to be a well-defined chemical entity. Its resistance to heat, the strong alkali and extreme heat required for its saponification, and the fact that phosphate has been found in the suspected gingers, would make it very probable that it may, indeed, be the ester suggested.

U. S. PUBLIC HEALTH SERVICE.
Washington, D. C.

Children Who Won't Eat

DISINCLINATION for what is considered the normal amount of food is a frequent source of worry to parents. Like the majority of the ills which beset the young, it is more alarming than dangerous.

With "only" children, want of appetite frequently springs from the self-centeredness of these isolated little beings. From babyhood every little ailment has been a signal for the upheaval of the household, and they speedily learn that to refuse food is the easiest method of securing the focussing of attention on themselves. Indeed, to all children, the spectacular in a refusal of food appeals.

In the nervous child, of ill-nourished body, very slight causes will lead to a disappearance of appetite. Emotion of any kind inhibits hunger, and the association of a particular variety of food with a previous disturbance will often act as a deterrent should the dish be set before the child again.

One of the most vicious habits of parents is the substitution of a delicacy for food which has been refused. Not only does this encourage the child in its line of conduct, but also the food which tempts is often ill suited to the young digestion.

For a capricious appetite in a child, there is often a physical cause. The brown-eyed child, with a shallow skin, inherits a weakness with its temperament—it is subject to an easily-disordered digestion. To the frail little stomachs of these children, plain food appeals little and the stimulation of rich or highly seasoned food is necessary to produce appetite.

The cutting of a child's first teeth is an

event in the household and the little sufferer is anxiously tended. When the second, or permanent, teeth begin to appear, little notice is taken of what is transpiring. Yet the mouth of a five or six year old child, busy with its second dentition, may be painful, and this pain will give rise to a disinclination for food.

Therefore, when a child begins to go off its food, the possibility of dental trouble should not be overlooked, the state of its digestion should be ascertained and, if the conclusion is arrived at that the phenomenon is nervous or psychic, placidity is the course to adopt.

It is better that a child should go twenty-four hours with very little food than that an incident connected with the forcing of food on it should be stamped on its wonderful little memory. In fact, with a child of weak digestion, a twenty-four hour fast is not at all a bad thing—it gives matters a chance to right themselves.

Above all, keep the little actor as much as possible out of the limelight. Let the child believe that the taking of its food is an event on a par with its refusal, and suggestion and natural appetite will speedily bring about a change which will dispel the maternal fears.

B. SHERWOOD-DUNN, M.D.
Nice, France.

Imperforate Anus (A Case Report)

ON JUNE 4, 1930, I delivered a multiparous woman of a 10-pound, male infant, using forceps.

Two days later I was called to see the baby, because his bowels had not moved.

On examination, no trace of an anus could be found, but in manipulating the perineal tissues to search for that orifice I discovered a small slit, $\frac{1}{2}$ inch long, about midway between the place where the anus should have been and the external genitals. The only comparison I can make was that this fissure looked somewhat like a miniature vagina.

During the examination, the baby cried and strained, and a drop of meconium was forced out of the slit, so I gently inserted the blades of a sterile hemostatic forceps, whereupon the child cried and strained violently, expelling a moderate

quantity of black, tarry material. Later I introduced a probe with a conical tip and felt it plunge through a thin membrane into an open space, after which there was a free discharge of meconium.

The child is, without doubt, a boy, but this slit may have been a rudimentary vagina, where the two halves of the scrotum did not close entirely.

I should be glad to receive suggestions as to the proper handling of this case. Plastic surgery seems to be indicated, but of what type and when should it be performed?

This is the first case of imperforate anus I have seen in over 2,000 deliveries.

J. R. SMITH

Warsaw, Mo.

[We shall welcome a free discussion of this case, with details of the proper procedure for the establishment of a controllable anus.—ED.]

Imperforate Anus (Comment)

This is certainly a case of imperforate anus and not at all a hermaphrodite. It seems to be a little doubtful in the doctor's mind.

The proctodeum did not infold to meet the hind gut, and, therefore, the normal anus is not evident. There has been a lateral conjunction of the two through this fistulous opening in the perineum; the "slit" is not a rudimentary vagina. As the doctor introduced his conical-tipped probe and "felt it plunge through a thin membrane into an open space," he ruptured the anal membrane, at what is known as "Hilton's white line," and locally established an outlet.

Whether the child will have fecal control, depends upon the relation of the sphincter muscle to this perineal fistulous opening, and answering of this question will determine the type of plastic procedure necessary to make a good, useful anus.

During the nursing life of the infant, while the stools are soft and mushy, the child will undoubtedly have good elimination; and, moreover, the new-born infant has so little fibrous connective tissue in his fascias that surgical procedure should not be attempted until later, probably at the

end of the first year to three years, but it should be cared for before the child is old enough to be embarrassed by his physical deformity.

CHARLES J. DRUECK, M. D.
Chicago, Ill.

Infant Mortality

STOCK market crashes and unemployment have failed to disturb the downward trend of infant mortality in the cities of the United States during 1929, in which the figure of 66.2 deaths among each thousand births is announced.

Next to the rate of 64.9, attained in 1927, the rate for 1929 is the lowest ever recorded for the cities of the country. The decline has been almost continuous since 1915 when the birth registration area, formed for the collection of dependable information, was organized. In 1928 the rate rose slightly (to 68.3) over the low point of 64.9 in 1927. Fifteen years ago, the rate was near 100. Today the rate is but two thirds what it was just after the World War started.

The report covers 720 cities in the birth registration area, which now includes forty-six states and the District of Columbia, which have satisfactory registration laws and record 90 percent of the births. The figures in the report are drawn from the provisional summaries of the United States Census Bureau and from state and local authorities.

The 1929 rate was the lowest ever attained in Chicago, Philadelphia, Detroit, Boston and Baltimore. Pittsburgh exhibits the most outstanding decline, the rate dropping from 120, in the five year period from 1916 to 1920, to 77 in the period 1925 to 1929.

Portland, Oregon, has the lowest rate among the cities over 250,000 population. Seattle was a close second with 46 and Minneapolis stood third with 49. Among the 10 largest cities in the country, St. Louis and New York tied for first place, with rate of 59. Close on their heels came the metropolis of the middle west, Chicago, with a rate of 60. Other figures were: Cleveland 61, Philadelphia 62, Los Angeles 65, Detroit and Boston 69, Baltimore and Pittsburgh 73.

St. Paul, Minnesota, was in the lead with a rate of 46, among the cities of the 100,000

to 250,000 class. Union City, New Jersey, stood first in the 50,000 to 100,000 class, with a rate of 25. In the 25,000 to 50,000 class, another Jersey community, West New York, stood in the forefront, tied with Revere, Massachusetts, each having rates of 26.

Among the smallest cities, with populations from 10,000 to 25,000, Northbridge, Massachusetts had the low rate of 15.

As a group, the cities of the Pacific Coast continue their undisputed leadership as the banner home for babies. Oregon and Washington lead the procession, with the cities of Minnesota in third place. Vermont, Utah and California cities show the same average rates.

AM. CHILD HEALTH ASSN.
New York City.

Continental Anglo-American Medical Society

THE Continental Anglo-American Medical Society, established in 1889, has recently held its meeting in Florence, Italy. The society is in excellent condition. It numbers among its honorary presidents, Dr. John B. Deaver, of Philadelphia; Dr. Charles H. Mayo, of Rochester; Drs. Simon Flexner and Bryson Delavan, of New York; and Dr. Richard C. Cabot, of Boston.

This society is composed of English and American physicians, who are practicing in the various cities of Europe and the Near East. The directory, which has just been issued by the honorary secretary and treasurer, Dr. B. Sherwood-Dunn, of 54, Boulevard Victor Hugo, Nice, France, (formerly of New York), shows the list of English-speaking practitioners in the various European countries, as well as in Egypt, Algeria, Jugo-Slavia, Morocco, Capri, Turkey, Port Said, and the Balearic Islands.

For instance, the directory indicates that there are 13 American or English physicians practicing in Paris; 3 in Nice, Berlin, Cannes, Brussels and Cairo; while 5 take care of the needs of Americans and Englishmen in Monte Carlo. There are 2 American physicians in Constantinople, Rome and Venice. In the African cities of Tangier, Casablanca and Algiers, American patients will find medical men who speak English as they do at home.

Dr. Sherwood-Dunn will be glad to send

to any American physician the directory of the society, so that American patients can always be referred to an English-speaking medical practitioner in any of these important foreign centers.

H. S. BAKETEL, M.D.
Jersey City, N. J.

A Medico-Pharmaceutical Episode*

JACK awoke early. Much disturbed about a "gum-boil" which was contaminating a preputial follicle, he visited a skin specialist who had recently finished his internship and opened an office over the corner drug store.

A correct diagnosis was made and proper treatment prescribed, but to protect the patient's identity the doctor agreed to procure the drugs.

The pharmacist was out, so the apprentice and the young M.D. decided to compound the prescription.

R. Hydrag. Chlor. Mite.....	1.50
Liq. Calcis q.s. a.d.....	200.00
M. Sig. Apply locally as a wet dressing.	

Dr. G. U. Chancroid.

The clerk weighed out twenty-four grains of calomel, put it in a six-ounce bottle and filled the bottle with lime water. A considerable amount of black precipitate developed in the bottle, but after several filtrations a perfectly clear solution was obtained, for which the doctor paid thirty cents and collected one dollar.

What's wrong here?

[We shall be glad to have our readers study this interesting problem very carefully and submit answers to the query at the end, several of which we will publish, with an approved solution.—Ed.]

Music or Noise

FTER the noise and stress of the day in one's place of employment, on the street, and practically everywhere, the average person requires rest and a degree of quiet in his own home.

Music has its charm; its rhythm and harmony soothe the tired business man or business woman as well as the often overtired mother of the family after the babies have been put to bed.

But the relaxation and pleasant stimula-

*From the *Bul. of the Chicago Med. Soc.*, Aug. 16, 1930.

tion to think of other things which music affords can only be secured from music which is not distorted or too loud.

Radios and player pianos which are set to produce the loudest possible tone are not producing music at its best nor as the composer or musician wished it to be reproduced.

The radio is built to give the listener the very finest possible tone, perfectly transmitting the modulations of the human voice and the pitch and tone of musical instruments, with varying shadings from piano to *crescendo*.

When the owner or operator of a radio set abuses his radio by turning on the volume control to give the maximum sound, he not only incorrectly interprets the music of the human voice being transmitted, but in addition causes ill feeling on the part of his neighbors, because such music has lost its charm and has the effect of ordinary noise.

Because perfect radio reproduction necessarily carries with it great reserve power in the amplifying apparatus, it is not intended that this should be utilized for local reception. This reserve power is intended to be used only for the reception of distant stations.

Remember your neighbor when tuning your radio. This is the "Golden Rule" for the radio user.—Chicago's Health, July 29, 1930.

The Future of the Patient

THE excellent essays on the "Future of Medicine," in the July, 1930, issue of CLINICAL MEDICINE AND SURGERY set me to wondering about the future of the patient.

Much has been said recently about the "shortage of doctors," when there really is no shortage. Many cries go up about the "high cost of medical service," when the way to economy is so clear and simple! If there is no change in the relationships between the medical profession and the laity, and between the specialists and the practitioners, the progress in medical science may prove an actual hindrance to the exercise of the healing art.

The country doctor, of blessed memory,

has been (verbally) consigned to the morgue by unfair propaganda, reflecting unkindly upon his competency. As a matter of fact he was, and is, a useful influence, even if he did nothing more than save some tonsils, thyroids and other organs, which certain surgeons would have eagerly (and sometimes needlessly) removed.

Any fairminded and impartial person knows that, for all practical purposes, the doctors in the smaller towns are, today, as well qualified as those in the larger places, and the two classes could work together very conveniently and with profit to both and to the public, if only some of the big-town specialists could forget their eagerness to push to the front. The men in the great cities are not nearly so bad in this way, but will send patients back to the family physician.

My experience with big-town consultants has been highly unsatisfactory, as a rule. They have a tendency to belittle the men from the smaller places and to get control of patients by methods which are often highly unethical. What is the outlook for the future of the patient, when certain doctors are fighting over him, in a business way?

If given a chance, the average small-town doctor is able to give ninety-five percent of his patients just as good and satisfactory care as they can get anywhere; but the big-town men will not give him a chance, if they can help it, and are spreading stories of his ignorance and incompetence, for their own benefit.

If medical men can learn to forget selfishness and professional jealousy, they will be much better public servants. And if people can learn that their family doctors can take care of nearly all of their ills, and will give them a chance to do it, hundreds of thousands of dollars can be saved every year, by reducing the number of fees paid to "specialists," many of whom are such only by courtesy and their own declaration.

O. B. BARRON, M.D.

Ferndale, Calif.

[The present tendency among laymen, to run to a specialist of their own choosing, is one of the needless ways of raising the cost of medical care, as is forcibly brought out in an article by Dr. Logan Clendening, in Collier's for Aug. 2, 1930.—ED.]

THE LEISURE HOUR

The Daily Prayer of a Physician

THE celebrated Prayer of Maimonides has been impugned as the work of a modern writer and more specifically that of Dr. Marcus Herz, a German-Jewish physician of the eighteenth century. In *J.A.M.A.*, June 22, 1929, Dr. E. Bogen, of Cincinnati, shows that the Prayer appeared in print seven years prior to Herz' publication. It is given, however, as "From the Hebrew," no author being designated. The earliest available reference to the Prayer, then, describes it as the work of a famous Jewish physician of Egypt, in the twelfth century, but whether the physician was Maimonides or not it is at present impossible to say. The Prayer is as follows:

"All-kind! Thou hast formed the body of man in full wisdom. Ten thousand times ten thousand tools Thou hast united within him, and these are unceasingly active to maintain the envelope of the immortal soul, this beautiful entirety in harmony. Continually they are busy in complete order, agreement and accord. Whenever, however, this order is broken by the fragility of the matter and the untamedness of the passions, the powers come into conflict with one another and the body falls unto dust. Then Thou sendest man Thy merciful messengers, the diseases, and they tell him that danger is approaching, and they urge him to forfend it.

"Thine earth, Thy streams, Thy mountains Thou hast blessed with such things as may bring remedy, and may mollify the pains of men and cure their ills.

"And Thou has endowed man with wisdom so that he may relieve the body of ill, so that he may recognize order and disorder, so that he can discover the proportions of things and ascertain their functions and prepare against each evil that which may ameliorate or prevent it.

"Me, also, Thine eternal providence hath chosen to watch over the life and health of

Thy creatures. I am about to begin the exercise of my profession. Aid me, O All-kind One, in this great work, so that it may be of avail, for without Thine assistance nothing succeeds, not even the least.

"May the love of fellow-man and the love of my art ensoul me. May not thirst for gain nor craving for fame mingle in my service. For these are enemies of truth and charity, and they might mislead me and keep me from doing what I ought to do for the weal of my fellow-men.

"Preserve the strength of my body and of my soul, so that I might be unperturbably ready to help the rich and the poor, the good and the bad, the enemy and the friend. Let me see in the sick the man alone. Enlighten my understanding, that I may see what is before and encompass it, and that I may surmise what is absent and detect what is hidden. Let my mind not sink, lest I fail to recognize what is visible and overvalue it; lest, indeed, see what is not to be seen at all. For the limit in my art is lightly traced, and it comprises the health and life of men.

"May my mind be always on the alert. While I stand at the bedside, let not alien things intervene to rob me of attentiveness, nor disturb me in my silent meditation, for great and holy are the searchings on which depend the weal and woe of Thy creatures.

"Grant that the sick have confidence in me and in my art, and that they heed my advice and orderings. Banish from their side all quacks and the host of counseling kindred and of otherwise nurses, for these are a cruel people and pervert the best intentions and thwart those who are expert in the healing art, and they lead men to death.

"If wiser men wish to teach and correct me, may I follow them and be grateful; for the compass of our art is large and wide. But if zealous fools upbraid me, then let

the love of my art keep me strong so that I may adhere to truth without regard to years and fame; for weakness and yielding would involve the pain and even the death of Thy creatures.

"Let me be patient and calm when older men of my profession, proud in the number of their years, crowd me out or taunt me or offer jeeringly to better me. But let this, too, be for my improvement, for they know things that are forgotten to me; still let not their conceit grieve me. They are old, and old age is not master of the passions. I, too, hope to grow old upon the earth, before Thee, O All-good.

"Give me frugality beyond all, except in the great art. May never awaken in me the notion that I know enough, but give me strength and leisure and zeal to enlarge my knowledge and to attain ever to more. Our art is great, and the mind of man presses forward forever.

"All-good! Thou hast chosen me, in Thy grace, to watch over the life and death of Thy creatures. I am about to go to my labor. Be with me in this great work, so that it may avail, for without Thy help nothing succeeds, not even the smallest."

He Was In Doubt

A teacher had been telling her class of boys that recently worms had become so numerous that they had destroyed the crops, and it was necessary to import the English sparrow to exterminate them. The sparrows multiplied very fast and were gradually exterminating our native birds.

Johnny was apparently not very attentive, and the teacher, thinking to catch him napping, said:

"Johnny, which is worse to have, worms or sparrows?"

Johnny hesitated a moment and then replied:

"Please, I never had the sparrows."

"Success depends on the proper functioning of the glands." This is especially true of the sweat glands.—*Lancaster New Era*.

Appropriate Names

A firm manufacturing orthopedic boots and shoes and advertising in the *Edinburgh Medical Journal*, is JAMES BOOTY AND SON.

Be Careful What You Say

In speaking of a person's faults,
Pray don't forget your own;
Remember, those with homes of glass
Should seldom throw a stone.
If we have nothing else to do
Than talk of those who sin,
'Tis better to commence at home,
And from that point begin.

We have no right to judge a man
Until he's fairly tried.
Should we not like his company,
We know the world is wide.
Some may have faults—and who have
not?
The old as well as young;
Perhaps we may, for aught we know.
Have fifty to their one.

I'll tell you of a better plan,
And find it works full well—
To try my own defects to cure
Ere others' faults I tell;
And though I sometimes hope to be
No worse than some I know,
My own shortcomings bid me let
The faults of others go.

Then let us all, when we begin
To slander friend or foe,
Think of the harm one word may do
To those we little know.
Remember, curses sometimes, like
Our chickens, "roost at home."
Don't speak of others' faults until
You have none of your own.
—Anonymous.

Add a Dash of Cyanide for that Perfect Cocktail

Cassville, Mo., July 29.—(Special)—Crazed by drinking a mixture of "canned heat," sweet milk and gasoline, Charles Goldsborough is held in jail here for brutally beating his aged mother.—*Chicago Tribune*, July 30, 1930.

My Paw

In Turkey, Paw sez, if a woman should fail
To cover her face when she goes out to walk
She'd get arrested. Here she wouldn't,
mebbe, hafta go to jail
But it would cause talk.

—B. H.

Diagnostic Pointers

Anemia

Anemia is much more common than is generally supposed. Socalled neurasthenia, or even mild psychoses and various states of malnutrition and weakness, may result from only a moderate diminution of the hemoglobin over a long period of time. Proper treatment of the anemia will often cause striking improvement in the patient's general condition.—DR. WM. P. MURPHY, in *Surg. Gyn. & Obst.*, Jan. 1930.

Colonic Adhesions

There is a great tendency, at the present time, to label every deviation from the normal physiologic function of the colon as colitis. DR. L. J. Hirschmann, of Detroit, in *J.A.M.A.*, Jan. 25, 1930, says that a large proportion of such patients will be found to give a history of one or more laparotomies or of pelvic inflammatory disease. The real cause of the symptoms in these cases is bowel fixation by adhesions. On pulling or tugging of the skin at the site of a scar or old inflammatory lesion, the colon can be drawn in the direction of the pull. This "tugging" sign will be valuable in differentiating the real condition which is not disclosed by the x-ray or other studies.

Cecum Mobile and Appendicitis

A great many persons are operated upon for chronic appendicitis when, in fact, the appendix has nothing to do with the symptomatology; the primary cause of the symptom syndrome lies in the colon, especially the cecum.

Undescended cecum, colon and cecum mobile, interfered function of the cecum and colon through fibrous bands, faulty anatomic position of the ileocecal junction, retrocecal appendix and malpositions of the cecum and colon, are all due to devel-

opmental anomalies; and unless these developmental anomalies are surgically dealt with, permanent relief of the complaints cannot be expected.—DR. A. CROTTI, Columbus, Ohio, in *Am. J. Obstet. & Gynecol.*, Mar., 1930.

Achlorhydria

There is a group of diseases in which achlorhydria is a common feature, along with gastrointestinal disturbances, sore tongue, anemia and, at times, spinal cord changes. These are: Pernicious anemia, pellagra, sprue and subacute combined degeneration of the cord. Perhaps the achlorhydria is the connecting link between them and pellagra is not based wholly upon vitamin deficiency. Diagnosis between these diseases may be largely a matter of geography and the personal bias of the physician.—DR. JAMES S. MCLESTER, in *Bul. Chicago M. S.*, May 10, 1930.

Measles and the Central Nervous System

Symptoms referable to the central nervous system may complicate measles. These include encephalo-myelitis, acute ataxia of the cerebellar type, or the picture may show involvement of the spinal cord, with little or no evidence of general involvement of the nervous system.

The onset is usually on the fourth to the sixth day of the eruption, characterized by drowsiness or stupor and a rise in temperature. The clinical picture may closely resemble that of epidemic encephalitis. There is usually a definite increase in the number of cells found in the spinal fluid and examination of the blood may show a leukocytosis with high polymorphonucleosis,—DR. P. K. JENKINS, in *J. Missouri St. M. A.*, Feb., 1930.

Current Medical Literature

Newer Aspects of the Therapeutics of Viosterol

In *J. A. M. A.*, June 14, 1930, Drs. A. F. Hess, J. M. Lewis and Helen Rivkin give the results of a test of the protective value of viosterol (10 to 20 drops per day) against rickets, carried out during autumn and winter, on 60 infants. It was found that, although viosterol in its present dosage generally conferred protection against rickets, yet 10 of the infants showed some evidence of mild rickets.

One matter that the investigators observed is that it is possible that rickets may exist with normal titer of inorganic phosphorus in the blood. In their series of cases there was not a single instance of diminished inorganic phosphorus and the authors think it probable that ultraviolet irradiation produces some factor which especially stimulates phosphatemia.

As a curative rachitic agent, viosterol must be regarded quite differently than as a preventive agent. When active rickets is present, there is no danger whatever of inducing hypercalcemia, which only develops when viosterol is administered (generally in excessive doses) to normal children.

The standardization of dosage of viosterol has been based on "rat units," but rickets in the rat is not the exact equivalent of infantile rickets. The former is dependent on deficient phosphorus in the blood, but the latter is not. The phosphorus-raising qualities of viosterol make it very suitable as a therapeutic agent for the first, but it has been found recently that viosterol was not so efficacious as equivalent amounts of cod-liver oil, in protecting infants against rickets.

It would seem best to express the potency of viosterol directly in terms of protective or of curative units. This is the method now being followed in Germany and other places.

The authors, in 1929, suggested about 10 drops daily of viosterol as a prophylactic dose for a normally growing infant. In view of their more recent experience, during the past year, they think this dosage should now be increased to 30 drops, from which amount they consider there is no danger. Premature infants require more.

Instead, however, of giving such a large amount daily, the potency of the viosterol might well be increased to from $2\frac{1}{2}$ to 3 times its present strength. Forty-five (45) drops of the old or its equivalent of the proposed new potency should be used as a curative dose, greater amounts being employed in more severe cases, as the physician judges necessary.

It would seem advisable also to increase the potency of "fortified" cod-liver oil. The present standardized formula contains 5 vitamin D

units. This potency should be increased, giving the same dose.

The authors conclude from their general experience that viosterol is a remarkable curative agent for rickets. It is absolutely reliable, very rapid in its action and never associated with the development of hypercalcemia.

Cervical Biopsies in the Office

A cervical biopsy is one of the best methods of arriving at a correct diagnosis. The technic is given as follows, by Dr. M. Glass, in *Am. J. Surg.*, Feb., 1930:

With the patient in the knee-chest position and using a Sim's vaginal speculum and a bivalve speculum in place, the vagina and cervix are gently swabbed with cotton until dry; the cervix and upper third of the vagina are painted with $3\frac{1}{2}$ -percent tincture of iodine; a single-hook tenaculum is inserted into the suspected lesion, to steady the cervix and afford the operator a point of leverage.

If the lesion is a polyp, use a moderate amount of tension and then, with cautery tip at a cherry-red heat, slowly transect the pedicle until the polyp has been severed.

With a cervical lesion, using a small knife, a small wedge of tissue is removed. Then gently sponge the bleeding point and cauterize the raw surface.

In all cases, a tampon soaked with 4-percent mercurochrome is placed flush against the cervix.

The Injection Treatment of Varicose Veins

The results observed following the injection method of treatment in 500 cases of varicose veins are reported by Drs. G. de Takats and H. Quint, of Chicago, in *Surg. Gynec. and Obst.*, Mar., 1930.

During the injection, the patient's leg is placed in the horizontal position and only rarely is the injection method used above the knee. A 50-percent dextrose solution has most frequently been used until recently, when 50-percent sodium chloride, in equal parts usually, has been substituted. A 10-percent solution of quinine and urethane, not exceeding 1 cc. at one injection and 2 cc. at one sitting, gives satisfactory results in dextrose-resistant cases. Pressure over the site should be considerable and kept applied for at least 48 hours.

An elastic bandage or stocking should be worn during the period of treatment and continued for 3 weeks following it. The total number of injections necessary depends upon the

particular case. Two injections may, in some cases, obliterate a whole segment of varicosities.

The average time required for cure was roughly 3 months. Only 389 of the 500 cases took the full course of injections.

Pulmonary embolism, fatal or non-fatal, was not observed in any case of this series.

The total number of failures in the series was 41 (10.6 percent). A radical operation was necessary in 16 cases.

The authors stress the necessity for testing the arterial and venous circulation before applying the injection treatment and also not to use it where the deep venous circulation is obstructed. They are satisfied that, when cases are properly selected, the injection method of treating varicose veins has many advantages over the radical method. The combination of preliminary ligation with the injection method has been very satisfactory.

Treatment of Paraphimosis

If a patient and skillful attempt at reduction of a paraphimosis fails, the stricture must be divided. In *Am. J. Surg.*, Feb., 1930, Dr. G. F. Schenck, of Los Angeles, gives the following techniques:

Under local anesthesia, two longitudinal incisions are made in the depths of the constricting ring, through the skin and subcutaneous tissue, dividing the stricture until the prepuce can be easily drawn over the glans. The incisions should be about 1 inch long and had best be closed transversely. This will enlarge the preputial orifice, cure the phimosis and prevent future paraphimosis.

In case a chancre or chancroid is the exciting inflammatory cause of paraphimosis, a bilateral slit (never a dorsal) should be made, to make the source of infection accessible and to prevent the destruction of the tissue. Under local anesthesia, the mucosa should be divided with scissors down to the corona and then the skin and subcutaneous tissue, through and above the constriction, until the prepuce is redundant. This prevents the formation of that hard, infiltrated mass on the ventral surface of the prepuce that always occurs after a dorsal slit has been made. A liberal incision, extending 3 to 6 cm. above the stricture, will usually suffice. This method will enable the primary lesions and coexisting infections to be treated.

Ingrown Toe Nails

In *Am. J. Surg.*, Feb., 1930, Dr. A. A. Thurlow describes the technic of dealing operatively with ingrown toe nails.

Following surgical cleansing, local anesthesia is effected with 1-percent novocaine (procaine), injected into the dorsal surface proximal to the matrix affected; then toward the plantar surface on the side to be operated upon; finally toward the base of the toe.

Incision is made on the dorsal surface, beginning at the cutaneous junction 1 cm. inside the mesial border and extending 1 cm. backward, so as to expose the whole depth of the matrix at this point, when the flaps are retracted. The

incision is then carried forward along the mesial side of the nail to the distal end. The flap is so dissected that the entire nail edge and corresponding matrix is exposed, leaving the epithelium of the nail sulcus to be removed with the nail margin. The lateral margin of the nail is now excised, together with its matrix and nail sulcus and, with a sharp curette, all particles of the matrix, epithelium and scar tissue are removed. The flap is then replaced. Sutures may be used if desired, but bandaging usually suffices.

The Sedimentation Test

The rate of settling of the red blood cells from a citrated column of serum, when allowed to stand, is known as the sedimentation test.

Its technic is given by Dr. D. Tollefson, in *Am. J. Surg.*, Feb., 1930, as follows:

Draw 0.2 cc. of a 5-percent sodium citrate solution into a 1 cc. graduated tuberculin syringe. With a small hypodermic needle attached, draw 0.8 cc. of blood from one of the small veins in the arm, thus making 1 cc. of a solution of citrated blood, which is placed in a standard calibrated tube. Shake thoroughly by inverting the tube, and take the time. When the erythrocytes have settled to the 18 mm. mark, leaving the clear serum above, take the time again. The difference in minutes is the sedimentation time.

The normal rate for the average healthy individual is about 120 minutes. The following readings show in some of the common infections:

	Minutes
Infected abortions	30
Pelvic abscess	16
Breast abscess	23
Active salpingo-oophoritis	38
Parametritis, recent	36
Fibroids and pelvic infection	65

Phenobarbital in Anesthesia

That present methods of anesthesia are not quite satisfactory is generally admitted. In *Surg. Gynec. and Obstet.*, Apr., 1930, Dr. Willard Bartlett draws attention to the advantages of luminal (phenobarbital) as a preanesthetic agent.

It is given orally, three hours before operation, in one dose varying from 12 to 30 grains (0.78 to 1.95 Gm.) and it takes effect in about an hour. The final surgical anesthesia is induced by nitrous oxide or ethylene, in concentrations much lower than would otherwise be necessary.

The patient comes to the operation room in a drowsy state and does not notice the induction of anesthesia. Morphine is not used. The effect lasts from 12 to 24 hours or even longer. If there should be very sharp pain, rousing the patient, morphine is given; but the frightened confusion usually following surgical procedures is absent in these patients. On the day following operation they rarely recall the events of the preceding day. Seventy (70) percent of patients who had luminal did not vomit during or after operation. There were no significant changes in blood pressure, pulse or respiration in any patient.

The use of luminal is contraindicated in patients who have much gastric retention and in those who are vomiting for any reason or who have a marked idiosyncrasy to the drug. Patients are generally very enthusiastic about this method of anesthesia.

Spinal Anesthesia in Office Urology

Spinal anesthesia may be used for a number of minor urologic operations and makes hospitalization unnecessary. In *M. J. & Record*, June 4, 1930, Drs. T. M. Townsend and C. K. Conrad, of New York, give a selected list of 20 cases so dealt with.

The anesthetic used was scurocaine. The needle is inserted between the twelfth dorsal and first lumbar vertebrae, or the second and third lumbar spaces, to anesthetize the spinal canal below the last dorsal and first lumbar vertebrae, which contain the lumbar nerves innervating the genital region.

It was found that generally 0.50 cc. produced sufficient anesthesia and earlier return of sensation.

The 20 patients selected for this report were all young, vigorous males, with an average blood pressure of 125/77; the average duration of anesthesia was 19 minutes when 0.50 cc. was used. The only reaction was headache, which continued from 2 to 10 days. There were no failures in anesthesia and all the patients went their way from the office, following operation, unattended.

344 Cases of Croup

Direct laryngoscopy and cultural studies of 344 cases of croup, in the Willard Parker Hospital, New York, by Dr. D. M. Tolle, as given in *Am. J. Dis. Child.*, May, 1930, showed that 212 (61.6 percent) were due to diphtheritic laryngitis, 126 (36.6 percent) to catarrhal laryngitis and 6 (1.7 percent) to other conditions.

Diphtheria antitoxin was found to be most advantageous when given intravenously to patients with laryngeal diphtheria.

Patients with simple catarrhal laryngitis recovered with little or no treatment.

Foreign bodies in the larynx, in the trachea or in the bronchi cause symptoms of croup; when in the larynx they cause symptoms closely resembling laryngeal diphtheria.

Polyp formation in the larynx must be considered as a rare cause of croup in children.

Frontal Sinusitis

In acute frontal sinusitis with much pain, if steam inhalations and epinephrin fail, amputation of the anterior end of the middle turbinal will usually give relief. If a cannula can be passed and the sinus washed out, this may be done, but it is more often impossible, in recent acute cases.

Incidentally, supraorbital pain is very often due to antral suppuration, in cases which show no evidence of involvement of the frontal.

External operation is called for only when

signs of external abscess formation occur. In most cases of chronic suppuration in the frontal sinus an intranasal operation is sufficient; I use Watson-William's rasps to enlarge the opening into the cavity, and I open up the anterior ethmoidal cells and pay special attention to Mosher's cells beneath the agger nasi. If relief does not follow, or if there is external abscess or fistula, an external operation is performed I remove the entire floor and prolong the incision downwards over the nasal process, so as to obtain good access to the infundibulum and anterior ethmoidal cells. I use no packing nor drainage tube.—DR. HAROLD BARWELL, London, Eng., in *Eye Ear, Nose and Throat Monthly*, Apr. 1930.

Diseases of the Ear in Childhood

According to Dr. G. E. Shambaugh, of Chicago, in *Am. J. Dis. Child.*, May, 1930, the ears of children are much more frequently affected than are those of adults. There are two outstanding reasons for this: (1) The occurrence in childhood of the infectious fevers; and (2) the greater frequency of acute infections involving the respiratory tract, with the harmful sequelae involving the middle ear.

From the study of the children in the public institutions for the deaf, it was found that deafness was acquired in 2,014 of the 5,348 children examined, and that the infectious fevers played an important part in the production of these acquired defects. Meningitis heads the list, and next in frequency is measles. Scarlet fever and influenza follow, in about the same proportions.

The serious defects in hearing resulting from the infectious fevers are not dependent to any extent on the occurrence of otitis media; rather they are the result of a toxic neuritis, independent of infection of the middle ear.

The reason that the pediatrician is especially interested in diseases of the ear is, perhaps, not so much the severe deafness that occurs as a result of infectious fevers, but the much more frequent otitis media, which often menaces the life of the child rather than produces any serious defect in hearing.

Increased Growth Through Use of Wheat Germ

In *Am. J. Dis. Child.*, May, 1930, Agnes F. Morgan and Margaret M. Barry, of Berkeley, Calif., report some experimental investigations of the nutritional value of vitamin B.

Two groups, including from 31 to 47 underweight children from 11 to 13 years of age, were compared as to growth in weight, height and certain other physical measurements, over three periods totaling thirty weeks.

Each child in one of these groups in each period was required to include in the noon meal 3 ounces (85 Gm.) of rolls made with 50 percent wheat germ and 50 percent white flour. The control group took the usual white flour rolls; thus the former group ingested a total of 15 ounces of wheat germ per week.

The weight increases in each of the wheat germ periods were about three times as great

as in the control periods. The difference in all cases was five or more times greater than the probable error of the difference.

The height increases were significantly greater in two of the wheat germ periods than in the corresponding control groups.

Alveolar carbon dioxide tension was increased in a larger percentage of the wheat germ-fed children than in the controls, a change possibly due to the diminished acidosis following increased food intake.

The significance of these observations is related to the recent discovery of the multiple nature of vitamin B and of the poverty of the major foods—fruits, vegetables, milk and meat—in the antineuritic substance (vitamin B, B1, F).

Congenital Dislocation of the Hip: New Treatment

According to Dr. C. H. Jaeger, of New York, in *Surg., Gynec. and Obstet.*, Apr., 1930, congenital hip dislocation can be diagnosed in the first three months after birth.

As the present methods of handling these patients are unsatisfactory, the author has adopted the following, which he considers a physiologic treatment. The aim is gradually to replace the dislocated head of the femur in the socket by means of a pressure pad, while the leg is held in marked abduction by means of a long hip splint.

The splint, of rustless steel, consists of two circular bands to fix the pelvis and chest; two lateral bars to support the leg; to the lower end of the bars is attached a footplate with a leather anklet. The long outer bar is bent to fit the leg at 45° abduction. There is no provision for traction or extension, these being unnecessary.

The adjustable pad is controlled by a wing screw about 1½ inches long and placed directly over the trochanter. It presses downward and inward and easily directs the head into the acetabulum.

The author states that this method assures normal development of the femur in the acetabulum, furthermore, it requires much less time than other methods—no more than 3 months—and gives a high percentage of cures.

Use of Iodized Oil in Diagnosis of Joint Lesions

In *Surg., Gynec. and Obstet.*, May, 1930, Drs. P. H. Kreuscher and H. Kelikian, of Chicago, report some preliminary clinical investigations in which very gratifying results have been obtained from the use of iodized oils and roentgenography in the diagnosis of joint lesions. The lesions particularly studied were those of the knee and hip.

For injection of the knee, a point is selected on the outer side of the joint, about 1 inch above the external lateral aspect of the patella. Through a small puncture opening in the skin, the needle is inserted under the patella into the joint cavity, any fluid in the cavity being aspirated. As much as 100 cc. may be injected without producing undue distension.

For the injection of the hip joint, a point is

selected 1 inch below the tip of the greater trochanter and just anterior to it. The needle follows along the neck of the femur until a definite obstruction is reached; i.e., the head of the femur. From here the needle is directed into the joint cavity. Roentgenograms are taken immediately.

Pulmonary Tuberculosis Treated by Gold-Sodium Thiosulphate

Dr. C. Shaw in *Practitioner*, Lond., Apr., 1930, reports that he has treated 35 pulmonary tuberculosis patients with gold-sodium thiosulphate (sanocrysine). The dosage employed in these cases was from 0.1 to 1 Gm., at weekly intervals, almost always by the intravenous route.

There were practically no reactions which might be considered dangerous.

The results obtained in this series were as follows: Much improved, 9; improved, 12; unaffected, 9; worse, 5.

From his experience the author concludes:

1.—The dosage must be adjusted to the individual; the goal to be achieved is a very slight reaction.

2.—If this is done, the criticism, that gold-sodium thiosulphate is a dangerous drug, is invalidated.

3.—The mode of its action seems, in part at least, to be specific, and to consist of a tissue stimulation.

4.—The results of its clinical use are more than encouraging. In certain cases of the utmost gravity, surprising successes are claimed; in others the rate of improvement—either spontaneous or the outcome of more conservative measures—is greatly accelerated.

5.—Cases of recent exudative disease, especially in young adults, yield the best results.

Treatment of Gastric and Duodenal Ulcer

In *Practitioner*, Lond., Apr., 1930, Dr. J. B. Alexander, of London, outlines the following medical treatment of gastric and duodenal ulcer:

The patient is confined to bed. Foci of infection are treated. The bowels are cleared. Heat (Antiphlogistine) is applied to the abdomen, more or less constantly for 10 days.

No food is allowed for 48 hours. On the third day, 2 ounces of peptonized hot milk with an ounce of Vichy water, is given. On the fourth and fifth days the peptonized milk is increased by 2 ounces each day and, on the latter day, 5 ounces of thin, strained oatmeal gruel is given, hot.

After the third day, enemas should be used to move the bowels and a saccharated oxide of iron tablet (3 grains) should be given twice a day. Raw eggs on cracked ice take the place of one milk feeding on the sixth day, and the milk, from this time on, need not be peptonized.

After the tenth day there should be a gradual increase in the food, but meat should be withheld for some time and then chopped chicken and chopped beef given.

The enemas are stopped after 2 weeks.

A powder containing 20 grains (1.3 Gm.) each of calcium, magnesium and bismuth carbonates is given, in 3 doses of 1 dram each, thrice daily from the fourth day, the number of doses being increased by one daily so that there are seven doses on eighth day.

After 3 weeks the patient is allowed to get up, and a month's rest at home is advised. During this time the patient is told to take $\frac{1}{2}$ ounce of olive oil daily, to diminish gastric secretion, and to avoid stimulants of hydrochloric acid.

Prevention of Congenital Syphilis

Much information regarding the possibility of preventing congenital syphilis may be obtained from the statistics of maternity clinics.

According to the results tabulated for the Sloane Hospital for Women, New York, by Dr. E. S. Coler, in *Venereal Disease Information*, May 20, 1930, it was shown that congenital syphilis was either the actual or contributory cause of death in 5.1 percent among infants of mothers who had had some form of antiluetic treatment previously. The mortality from congenital syphilis among infants of untreated mothers or emergency cases delivered was 51.4 percent.

Among 354 living infants born to syphilitic mothers, the percentage results are as follows: infants with negative Wassermann reaction, 37 percent; infants with positive Wassermann reaction, 38 percent; infants lost track of, or Wassermann results lost, or blood anticomplementary, 15 percent; normal infants of normal mothers who had a positive Wassermann reaction during a previous pregnancy, 10 percent.

The figures would seem to prove that the great role which antisyphtilic treatment plays during pregnancy is its ability to lower fetal mortality and, in a certain percentage of cases, to effect a fetal and maternal cure.

One factor of vital importance must not be lost sight of, and that is the "time factor," or the duration of the pregnancy when the treatment is started. From the statistics of other observers in large clinics, it has been shown that, in order that treatment should be effective, patients should begin antisyphtilic treatment before the end of the sixth month of pregnancy.

Hemorrhage in the Late Stages of Pregnancy

In accidental hemorrhage during the late stages of pregnancy, the treatment, according to Dr. M. E. Gorman, Lindsay, Ont., in *Canad. M. A. J.*, Jan., 1930, is to empty the uterus. If the woman is in labor, deliver her at once with forceps, remove the placenta manually and be on guard against postpartum hemorrhage.

If she is in labor with the os not dilated and the loss of blood has been severe, pack the vagina. The Rotunda method is best. Use pledgets of cotton about the size of the thumb and soak them in lysol solution (0.5 percent) or boil them if there is time. Have the patient on her back and use the left hand as a speculum to retract the posterior vaginal wall. Push a

pledget up into the posterior fornix with the fingers of the right hand and be sure that it is in the posterior fornix and that the cervix has not been pushed backward instead. Next put pledgets into both lateral fornices and finally one into the anterior fornix. Fill the spaces in between these plugs with more pledgets so that there is a ring around the cervix, then build the rest of the packing upon this ring.

Pack tightly or it would be better not to do it at all, as there is considerable shock from the process. Then put on a tight abdominal binder to keep the uterus down on the plug. This stops the bleeding and gives time to decide on the next step. The best method is, probably, to empty the uterus by cesarean section, but, if this is refused or decided against, give pituitrin and keep the patient packed until the os softens enough to dilate, and then deliver her as rapidly as possible.

If the woman is not in labor and is bleeding, cesarean section offers the best hope.

Reduction of Simple Fractures Under Local Anesthesia

There are many occasions in which a general anesthetic cannot be used during the reduction of a simple fracture. In *Am. J. Surg.*, May, 1930, Drs. J. M. Mora and D. A. Willis, state that they have been using a 1-percent solution of procaine with adrenalin (1 minim to the ounce). A small wheal is made in the sterilized skin in the vicinity of the fracture and the solution is injected in and around the fragments. Sixty (60) to 70 cc. may be injected, depending on the size of the fracture. Anesthesia is complete in from 10 to 30 minutes. No untoward results have been observed.

Lactose and the Intestinal Flora

Many methods have been employed to transform the intestinal flora in a favorable manner.

In *J.A.M.A.*, June 21, 1930, Drs. N. Kopeloff and P. Cohen, of New York, from experimental investigations, have established these points, subject to the limitations inherent in the investigation of three groups, each of fifteen healthy young adults in the third decade, who ingested lactose daily for a period of from three to eight months:

1.—The ingestion of 10 Gm. of lactose (about one heaping teaspoonful) daily did not result in a transformation of the intestinal flora, as determined by plate or microscope count of fecal specimens.

2.—The ingestion of 50 Gm. (about 2 ounces) of lactose daily caused a transformation in four out of fifteen subjects.

3.—The ingestion of 100 Gm. (about 4 ounces) of lactose daily caused a transformation in three out of fifteen subjects. The maximum percentage of viable *B. acidophilus* (88 percent) occurred in this group.

4.—*Bacillus acidophilus* was present in 27 percent of the subjects before lactose injection.

5.—The presence of *B. acidophilus* before lactose ingestion did not aid in effecting a transformation.

6.—The lactose dosage appears to be the sole factor in effecting transformation in a given period of time.

7.—The lactose dosage employed (from 10 to 100 Gm.) was not sufficient to insure uniform transformation in from three to eight months.

Eye Injuries and the General Practitioner

In the case of an eye injury, as stated by Dr. Jas. M. Patton, of Omaha, in *Northwest Med.*, Mar., 1930, if it is not practical to send the patient to an oculist, that fact does not relieve the general practitioner of the responsibility of doing what he can to save the eye.

If the patient is an adult, the eye can be anesthetized by instilling a few drops of 3 percent cocaine solution, which will usually enable the patient to allow a thorough investigation of the wound. Nervous patients and children should be given a general anesthetic.

If the wound is a clean perforation of the cornea or sclera, without any prolapse of intraocular structures, cauterization of the wound with trichloracetic acid, a double bandage, rest in bed, and general treatment are probably all that will be necessary.

If there is vitreous or uveal prolapse, anesthetization should be more complete, accomplished by carefully touching the operative field several times with a small cotton applicator moistened with 10-percent cocaine solution.

When the area is quite insensitive, a sliding conjunctival flap should be prepared, with the sutures in place. The prolapse and adjacent tissue would be cauterized with trichloracetic acid, drawn out slightly and excised as close to the cornea or sclera as possible. The wound is again cauterized with the acid and covered with the conjunctival flap. Mercurochrome (1 percent) or argyrol (10 percent) is then instilled in the culdesac, double bandage applied and the patient put to bed.

Predisposition in Disease

The old doctrine of diatheses has been revived in another form by Dr. W. L. Brown, of London, Eng., who in *Brit. M. Jour.*, Mar. 27, 1930, speaks of a predisposition to disease due to the heredity of certain factors. These are, especially, inborn errors of metabolism, idiosyncrasy (hypersensitivity or allergy), disturbed endocrine balance and the posture of the viscera.

There are peculiarities of metabolism in some individuals which may take the form of a lack of some ferment or important secretion, or may appear as an intolerance to the assimilation of substances to which the ordinary individual is immune. Some start out with inadequate endocrines or with a disturbance in the balance be-

tween the two great divisions of the visceral nervous system—the sympathetic and parasympathetic or extended vagus. The very posture of the viscera will modify the type of disease produced by similar causes.

These predispositions to disease can be shown, in many instances, to be inherited according to Mendelian laws and to reside in the chromosomes of the nuclei of the gonads. It might be thought that they would be such a handicap in the struggle for existence that they would lead to their own disappearance by the destruction of the individuals possessing them. In some cases this is so, but we must remember that a defect which is not fatal to propagation will continue to be propagated—not perfection, but survival, is Nature's aim. But the importance of a knowledge of the family history is greatly enhanced by these recent observations, and for that knowledge we must depend on the general practitioner, who is, and must continue to be, the backbone of our profession.

Undetected Syphilis and Rheumatic Infection

In *Brit. M. Jour.*, Mar. 27, 1930, Dr. A. D. Fordyce reports a series of 9 cases of rheumatic infection in congenitally syphilitic children; in 6 of the 9 cases there were no obvious signs of congenital syphilis.

The author suggests that undetected syphilis may, in some cases, form a basis for the serious course of rheumatic infection, and, further, that the study of rheumatism may be aided by the grouping of rheumatic cases along nonrheumatic lines.

Implantation Method of Skin Grafting

Experience with the implantation skin grafting method (introduced by Braun in 1920) in 60 cases is reported by Dr. O. H. Wagensteen, of Minneapolis, in *Surg. Gynec. & Obstet.*, Mar., 1930.

In this type of grafting the material is obtained in the same manner as in Thiersch grafts. A piece of skin about 3 inches long and 1½ to 2 inches wide will serve to cover a very large defect. The skin is cut into many small pieces, about 2 to 4 square millimeters in size, with scissors and the pieces caught up with a fine sewing needle and dropped on the surface of the area to be grafted, in the manner of seeding. The essential condition is that this surface must be granulating, but the presence of infection need not be an obstacle. A granulating surface rapidly becomes covered with epithelium by this method.

In very severe burns the cosmetic results may not be above criticism. For the epithelialization of excavated defects this simple method of grafting has no equal.

NEW BOOKS

Savill: Clinical Medicine

A SYSTEM OF CLINICAL MEDICINE; Dealing with the Diagnosis, Prognosis, and Treatment of Disease, for Students and Practitioners. By Thomas Dixon Savill, M.D. Lond. Eighth Edition. New York: William Wood and Company, 1930. Price \$10.00.

Dr. Savill's textbook of clinical medicine, which has now run into eight English editions, is one of the best treatises of its kind that we have seen.

In every chapter the work bears evidence of careful and conscientious planning. The basis of the approach to the study of clinical medicine is symptomatology, but the author departs from the more usual method of arriving at a diagnosis by a process of exclusion and rather follows that of a positive cue from leading symptoms which point, not to the least improbable but rather to the most probable diagnosis. This means the ultimate verification, if possible, of a working hypothesis.

There are 20 chapters, most of which deal with pathologic conditions of the various regions or systems of the organism or special groups of diseases. We like especially the author's handling of the diseases of the respiratory passages, of the nervous system, and disorders evidenced by urinary changes, but every chapter is thorough.

The volume is intended for the use of students and practitioners. Though it follows English methods of practice, the facts are general and the methods of investigating disease clinically are applicable everywhere. The necessity of covering such a vast field in a single volume has forcibly led to concise descriptions and a summary dealing with many important conditions, but this is only what should be expected.

On the whole, Dr. Savill's book must be considered an excellent general treatise on the present-day conception of the clinical practice of medicine, of value to all general practitioners.

Andrews: Diseases of the Skin

DISEASES OF THE SKIN. A Textbook for Practitioners and Students. By George Clinton Andrews, A.B., M.D., Associate Professor of Dermatology, College of Physicians and Surgeons. Columbia University: Consulting Dermatologist and Syphilologist to Tarrytown Hospital; to St. John's Hospital, Yonkers; to Grassland's Hospital; and to the Broad Street Hospital, New York City. With 988 Illustrations. Philadelphia and London: W. B. Saunders Company. 1930. Price \$12.00.

In a general textbook for students and prac-

titioners one does not expect more than accurate descriptions of the generally-accepted views on the subjects dealt with; there is no call for either dogmatism or controversy.

Whether in the face of the many current texts on dermatology there is an actual need for a new one, is a matter that time alone can tell. However, Dr. Andrews has succeeded in producing a really excellent treatise which fulfills all the requirements of a satisfactory general descriptive handbook on skin diseases and has the advantage that it includes most of the newer views on etiology, pathology and treatment. The author makes no extravagant claims; his book has been written for the service of practitioners and students and he has tried to present the newest knowledge lucidly, with the view of the requirements of modern practice.

There is, perhaps, no specialty in medicine, in which the etiology of many conditions coming within the purview is in such an unsatisfactory condition, as dermatology. Where there is doubt, Dr. Andrews is careful not to be dogmatic or controversial; in such a condition as urticaria, for example, he enumerates the various possible factors that may be involved in its production and leaves it at that—an attitude that might well be emulated by authors of other general textbooks.

There are 36 chapters in the volume; about one-third deal with generalities of anatomy, diagnosis, symptomatology and the principles of treatment; the other two-thirds take up in detail special classes of conditions affecting the skin.

The pyogenic, syphilitic and trophic skin diseases are especially well described and illustrated, and there are two important chapters dealing with diseases due to fungi and to animal parasites. Also the chapter on dermatoses due to chemical irritants contains a good deal that is new.

Roentgen, radium and ultraviolet therapy of skin diseases have special chapters devoted to them, and their general results are critically summarized. There is also a special chapter devoted to the supersoft x-rays or grenz rays.

Extensive bibliographies at the end of each chapter give the reader the advantage of a fuller pursuit of the subjects dealt with, if such should be desired.

So far as we can judge, Dr. Andrews' book is an excellent presentation of the present position of general dermatology, including all the common and most of the rarer skin diseases. It should prove a good reference work for the general practitioner who needs an up-to-date work on this subject, as the treatments are

clearly described and are generally such as come within his scope.

The bookwork is excellent and the illustrations have been chosen with judgement, many being original.

Zemsky: Oral Diseases

ORAL DISEASES. A Practical Treatise Offering Diagnostic and Therapeutic Aid to the Practitioner of Medicine and Dentistry. By James L. Zemsky, D.D.S., New York City, Author of the "Outline of Oral Surgery"; Attending Oral Surgeon to the Midtown Hospital, N. Y.; Lecturer on Oral Surgery, Post-Graduate Courses, Allied Dental Council; etc. Illustrated with 414 Engravings Made from Original Roentgenograms and Photographs. Brooklyn, N. Y.: Physicians and Surgeons Book Co., Henry and Pacific Streets. 1930. Price \$8.00.

This volume is a reprint of a series of articles originally published in a dental journal from 1926 to 1929.

Although not a textbook nor in any sense a systematized treatise on oral disease, yet it should be warmly welcomed by dental and oral surgeons, because it presents, in a clearly understandable and significant clinical manner, interesting cases that are likely to present themselves daily to such practitioners.

The great value which the author places on roentgenograms and the hundreds of such pictures presented throughout this book show the vast advance which this diagnostic aid has made in this specialty within recent years. In fact, one would be inclined to think that, in many types of cases, the oral condition could not be diagnosed (and hence properly treated) without the roentgenogram.

The author, in his preface, appears to be a little apologetic for publishing his work. He need not be. There is plenty of scope and place for clinical studies such as are given here. The 26 chapters, with illustrations and the accompanying descriptive text, form a veritable atlas of practical oral conditions of great value to practitioners.

Any stomatologist who aspires to be anything more than tooth puller should find every page of this book fascinating and valuable and he is advised to procure a copy of it.

Mathews: Physiologic Chemistry

PHYSIOLOGICAL CHEMISTRY; A Text-Book And Manual For Students. By Albert P. Mathews, Ph. D., Carnegie Professor of Biochemistry. The University of Cincinnati. 5th edition. Illustrated. New York: William Wood and Company. 1930. Price \$7.00.

The fifth edition of Dr. Mathews' textbook on physiologic chemistry is a carefully compiled and standard teaching manual on this important subject.

The book is divided into three main parts: Part I deals with the chemistry of protoplasm and the cells and comprises five chapters; Part II, consisting of 18 chapters, is the most important section, from the standpoint of practical medicine, and takes up the mammalian body

considered as a machine, its growth, maintenance, energy transformation and waste substances. Here are discussed the various processes of digestion, the circulation of the blood and its functions, the nature and physiologic roles of the various tissues, the chemistry of metabolism and excretions, etc., and a short but important chapter on the chemical defense against disease. Part III is devoted to practical work and laboratory methods.

The great advances of the past quarter-century, in our knowledge of the biochemical processes constantly going on in the body and their relation to normal physiologic and physiopathologic phenomena, are well brought out. It is clearly evident that Professor Mathews has carefully scanned the world's literature, judiciously weighed the value of the enormous research work that has taken place in these realms, and included in his treatise such matters as may, with a fair degree of confidence, be accepted as definitely established. For students who desire to pursue certain phases more thoroughly than can be entered into within the limits of a concise textbook, select bibliographies are appended to each chapter.

The present edition contains much new matter regarding vitamins, internal secretions, bile salts, etc.

The work may be recommended as a representative, well written and critical exposition of present-day knowledge of chemical physiology or biochemistry.

Corner: Anatomy

ANATOMY. Clio Medica series. By George W. Corner, M.D., Professor of Anatomy in the University of Rochester. Illustrated. New York: Paul B. Hoeber. 1930. Price \$1.50.

This is volume III of the "Clio Medica" series of handbooks, which aim at representing, in a concise and readable form, a number of special phases of the history of medicine.

The development of anatomy is here unfolded and pictorially presented, from the early Grecian and Roman periods, through the Saracens of Spain to Salerno, in Southern Italy, and continuing through Rolandine, Mondeville, Mondino and Vesalius, down to the present time.

For the busy practitioner who has not the time nor, perhaps, the opportunity of studying the more pretentious tomes on the history of medicine, these little outlines, which do not cost much, present the salient and pertinent facts and there is the satisfaction of knowing that they are written by those fully acquainted with the subject with which they deal.

Rice: Obstetrics for Nurses

OUTLINE IN OBSTETRICS FOR NURSES. By F. W. Rice, M.D., Instructor in Obstetrics, Iowa Methodist Hospital, and Broadlawns General Hospital, Des Moines, Ia. Illustrated. St. Louis: C. V. Mosby Company. 1930. Price \$2.00.

This outline of obstetrics is intended as a reference book for teachers and for student nurses and represents the accumulation of notes used by the author in lecturing to nurses during eleven years. The text is so arranged that the grad-

uate or student nurse may at once get a bird's-eye view of the symptoms and treatment of obstetric conditions, without stopping to read a whole chapter in a general textbook.

The book should be useful to any teacher of nurses who arranges his lessons in the scheme followed by the author.

Bookfellow Verse, 1930

A BOOKFELLOW ANTHOLOGY—1930. By 96 Authors. Cedar Rapids, Iowa: The Torch Press. Price \$2.00.

This project of cooperative publishing is one of the most interesting developments in the field of American poetry, and is no longer an experiment, this being the sixth number.

To those who have watched for the successive volumes from year to year, it has been interesting to notice the slow but steady improvement in the quality of the material included. It must be that some force is at work in the Order of Bookfellows which is raising the level of literary taste among the contributors to the "Anthology," for the number of trite and narrowly local burblings and of personal safety-valve outbursts grows less and less; while the number of examples of real poetic feeling increases.

The worthwhile numbers now constitute nearly twenty-five percent of the offerings—which compares rather favorably with the average output of many famous poets.

An unusual number of the verses in this year's collection show evidence of the polishing process which characterizes the work of the sincere verse writer, in contrast to that of the emotional type who "just dashes something off" and is too lazy or too conceited to work on it until it is as good as he can make it.

This being the first of the second series of five volumes, a new and attractive style of binding has been adopted. The paper and bookwork have always been of a high order.

The physician who will place this volume on the reading table in his reception room will give his patients many pleasant moments; and it would do him good to dip into it, now and then, himself.

Bedingfeld: Visceroprosis and Chronic Invalidism

VISCEROPTOSIS AND ALLIED ABDOMINAL CONDITIONS ASSOCIATED WITH CHRONIC INVALIDISM. By H. Bedingfeld, D.S.O., M.D., (Ed.), Ch.B., M.R.C.P. (Lond.). New York: Humphrey Milford, Oxford University Press. 1930. Price \$3.50.

Dr. Bedingfeld's monograph on visceroprosis and allied conditions associated with chronic invalidism is a reprint in book form of papers originally appearing in the *Quarterly Journal of Medicine*.

The subject is treated in the form of a historical and collective review of the condition which became recognized as Glénard's disease. From his study the author arrives at the general conclusion that the symptom-complex is associated with a possibly inherited constitutional

factor which, itself, is dependent upon the state of nutrition and the state of mind. As the author puts it: "When sensations from malfunctioning viscera rise into consciousness, in an individual who is the subject of repressions based upon an inferiority complex, these tend to be utilized in the form of symptoms to reinforce the repression . . . Later, with the establishment of the vicious circle of malfunction-symptoms-malfunction, actual tissue changes may occur in the affected organs, rendering them incapable of a return to normal function."

The book offers very interesting reading, for the general practitioner as well as for the gastroenterologist. If the author's conclusions are correct, the elaborate surgical procedures which have grown around visceroprosis are useless and such expedients as abdominal supports are superfluous.

The reading of such books as this, dealing with general and basic principles, will strengthen the professional grasp of any physician.

Contraceptive Technic

SUGGESTIONS FOR CONTRACEPTIVE PRACTICE. For distribution to members of the Medical Profession only. New York City, 156 Fifth Ave.: Research Department, Holland-Rantos Co., Inc., 1930. Gratis to physicians only.

Several rather extensive works on contraception have appeared recently, but this little booklet, though prepared by a commercial house, embodies the gist of the most successful method recommended in the larger books. It is illustrated, well printed and contains a practical bibliography of the subject, about which most physicians should know a good deal more.

Ewing: Aphasia in Children

APHASIA IN CHILDREN. By Alex W. G. Ewing, M.A., Ph. D. With An Introduction By E. D. Adrian, M.D., F.R.C.P., F.R.S., Fellow and Lecturer of Trinity College Cambridge. New York: Humphrey Milford, Oxford University Press. 1930. Price \$3.50.

That the speech and language function, the most distinctive characteristic of the human species, is more susceptible than any other to pathologic conditions affecting the brain, is evident from the facts of adult aphasia. Much water has, however, flowed under the bridges of investigation since Broca, in 1861, first enunciated his conclusions connecting special cerebral lesions with speech incapacity and correlated phenomena, especially aphemia or aphasia.

In the monograph under notice, Dr. Ewing shows that there is a great difference between the aphasia of children and that of adults. The latter is due to a breakdown in the complex machinery set up in infancy for symbolic thinking and expression. In the former there is a failure to set up the machinery in the first instance.

This book is chiefly concerned with the systematic study of 10 congenitally aphasic children, some of whom were partially deaf. With the greatly improved newer testing apparatus, defects of hearing and speech capacity can be determined with much greater accuracy than formerly.

Dr. Ewing shows that many of these types of patients can be "re-educated" and that linguistic retardation (aphasia) can be corrected by special training.

The various discussions are, to a large extent, academic and will be appreciated only by those who have a special interest in the study of psychologic and sensory phenomena of this type; but there is also the practical application alluded to, which will interest those in charge of deaf and dumb children or adults, especially the results of the experiments carried out by the author.

Turner: Personal and Community Health

PERSONAL AND COMMUNITY HEALTH. By Clair Elsmere Turner, M.A., Dr. P.H., Professor of Biology and Public Health in the Massachusetts Institute of Technology; Formerly Associate Professor of Hygiene in the Tufts College Medical and Dental Schools, etc. Third Edition. St. Louis: The C. V. Mosby Company. 1930.

This book presents the many facts which an intelligent citizen or student of economics should know regarding personal and public hygiene and the principles upon which the attainment and maintenance of health is based.

The volume may serve as a textbook for students of sociology, on matters pertaining to public health.

The section on community health includes the essentials of immunity, public health administration, school and industrial hygiene and a chapter on the use of disinfectants.

The book is one for the laity rather than for the medical profession, and may be recommended to teachers, social workers and others with similar interests.

Fellner: Medical Practice in Vienna

DIE THERAPIE DER WIENER SPEZIALARZTE; Bearbeitet Von Den Fachärzten Wiens. Herausgegeben von Dr. Otfried O. Fellner, Frauenarzt in Wien. Dritte, vermehrte und verbesserte Auflage. Berlin & Wien: Urban & Schwarzenberg. 1930. RM 20.—

In this book the current specialistic treatment of disease in Vienna is given. The first edition appeared in 1908 when things were very different and Vienna was a medical Mecca.

The diseases, medical and surgical, are arranged alphabetically and a short summary of treatment is given under each, signed by a prominent Vienna specialist.

Blavatsky: People of the Blue Mountains

THE PEOPLE OF THE BLUE MOUNTAINS. By H. P. Blavatsky. Wheaton, Ill.: Theosophical Press. 1930. Price \$2.00.

To those possessed of imagination, India has always been a land of mystery and fascination. Almost anything could happen there, and, as a matter of serious fact, many things do happen there which seem miraculous to occidental minds.

In the southern tip of India are the Nilgiri mountains—very rugged and precipitous in places. Part of this mountainous district is known as the Blue Mountains, on account of the peculiar tint of the mists which surround them almost constantly. These mountains, which, by the natives, were considered holy and unapproachable, were first penetrated by white men in 1818. These explorers found there a surprisingly cool and salubrious climate, luxuriant vegetation and several primitive races, not described elsewhere in the world. Madam Blavatsky became interested in the published accounts and set out to investigate these people herself, after which, in 1883, she wrote this book, which has, however, only now been published in English.

The first half of the volume consists largely of extracts from official reports of the various exploring parties which first visited the Blue Mountains, with Mme. Blavatsky's caustic comments upon them and upon the stupidity of the British government of India.

It appeared from the reports that the origins and ethnology of some of these tribes, notably the Todds and the Kouroumbs, were very obscure and that they were in possession of certain supernormal powers. Nothing more was needed to fire the interest of this energetic and indefatigable occultist.

The entire book is written in the stately but powerful style for which the author is well known, and she has set down the details of the things she saw and heard, so that the reader can come to his own conclusions. Her own belief was that the two tribes mentioned above, though scarcely removed from the social condition of barbarism (or even savagery, in the case of Moulou-Kouroumbs), were actually possessed of certain occult powers which, in those days, were included under the name of witchcraft.

The word-pictures of the country, the people (native and white) and of her experiences are strong and vivid, and the book is a real addition to the ethnology of India, as well as being a fascinating narrative for anyone who cares for stories of exploration and adventure. The book-work, too, is excellent.

MEDICAL NEWS



Edward H. Angle, D.D.S., M.D., Sc.D.

Noted Dentist Passes

Dr. Edward Hartley Angle was born in 1855 and was graduated from the Pennsylvania College of Dental Surgery, Philadelphia, in 1878.

He practiced his profession in Tamaqua, Pa., Minneapolis, and St. Louis, devoting his entire time, for the past thirty years or more, to the practice and teaching of orthodontia, of which subject he was professor, successively, in the University of Minnesota; Northwestern University Dental School; Marion Sims College of Medicine; and the Dental Department of George Washington University Dental School. His M.D. and Sc.D. degrees were honorary.

In 1908, Dr. Angle returned to the East for a few years and then made his home in Pasadena, Calif., until the end, which came on August 11, 1930, shortly after he had finished perfecting some improvements in orthodontic mechanism.

He was a man of high ideals and a powerful personality and exerted a strong influence upon the development of his profession.

300 Years of Quinine

The tercentenary of the recognized use of quinine in the treatment of disease will be celebrated in a number of places (notably in St. Louis) on Oct. 31 and Nov. 1, 1930.

Medical Examination Car

The Milwaukee Railroad has recently built and equipped a car to be used for the physical examination of employees engaged in train operation and of applicants for such positions, to supplement the work of the company's local physicians.

This car is equipped with an x-ray machine and all other apparatus needed for making a complete, modern physical examination, and also includes a first-aid room and living quarters for the medical staff which will operate it.

Opening in So. Dakota

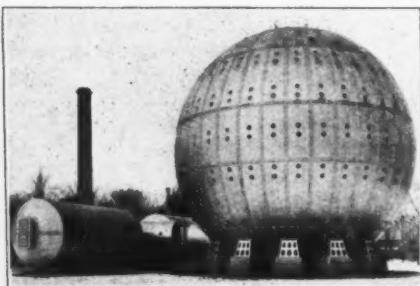
We are informed that there is a good opening for a young physician in South Dakota. Full particulars may be obtained by writing to Mr. S. V. Knudsen, Bristol, So. Dakota.

Medical Society Advertising

The Pierce County (Washington) Medical Society's collective advertising in the Tacoma newspapers has a feature that is lacking in similar collective medical advertising elsewhere. This is a question-and-

answer service along general health and medical lines, maintained by the Society, the public being invited to write to the headquarters of the Society on matters of interest to them.

Answers are given by personal letters which are dictated by the advertising committee members and go out under the name of the Society.—Editorial, *Journal-Lancet*, July 1, 1930.



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A High-Pressure Sanatorium

Dr. O. J. Cunningham, of Kansas City, Mo., conceived the idea some years ago that diabetes mellitus, pernicious anemia, syphilis, carcinoma and several other diseases are due to anaerobic bacteria, and that, if sufferers from these maladies could live in an atmosphere of oxygen under pressure, they would recover.

Although the doctor has neither condescended to announce his reasons for so remarkable an opinion, which has no known basis in scientific fact, nor to publish detailed clinical reports of cases treated by his pressure method (though repeatedly invited to do so), he has found some one to finance the scheme in a large way, in the person of H. H. Timken, of Cleveland, O., who has built the tank sanatorium pictured above, at a reputed cost of a million dollars.

The sphere is 64 feet in diameter and has five floors, with an elevator in the center. The first floor is the dining room; then three bedroom floors, each with 12 sleeping rooms with bath; recreation room at the top. There are 250 portholes.

The horizontal tanks are 35 and 70 feet long, respectively, and 16 feet in diameter.

United States Civil Service Examinations

The United States Civil Service Commission announces the following open competitive examinations:

Medical Officer

Associate Medical Officer

Assistant Medical Officer

These examinations are to fill vacancies in the Veterans' Bureau, Public Health Service, Coast and Geodetic Survey, Panama Canal Service, and Indian Service.

Social Worker (Psychiatric)

Junior Social Worker

These examinations are to fill vacancies in Veterans' Bureau hospitals throughout the United States.

Applications must be on file with the United States Civil Service Commission, Washington, D. C., not later than December 30, 1930.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the United States Civil Service Board of Examiners at the post office or custom-house in any city.

Indian Medical Record

We have received a copy of the Golden Jubilee Issue, of the Indian Medical Record, which for the past 50 years has been instrumental in waging the fight for the introduction of modern scientific medicine among the teeming millions of India, steeped in superstitions and magical medical rites and incantations. Nevertheless, at one time, Indian Medicine was highly advanced, as might be expected among a people of such ancient culture.

This number is most interesting, containing many reminiscences of the Journal's vicissitudes and pictures of the men connected with its history. It is also interesting as well as shameful to find that certain of the United States medical diploma mills sold their diplomas for a few rupees in India, thus duping those unfortunate people and casting a stigma on the United States among the more educated native physicians.

We wish the Indian Medical Record another 50 years of success.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward request for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, a registered pharmacist, or a nurse.

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| G- 17 | An Index of Treatment. Burnham Soluble Iodine Co. | G-271 | The Intestinal Flora. The Battle Creek Food Company. |
| G- 45 | Vera-Perles of Sandelwood Comp. Paul Plessner Co. | G-292 | Acidosis and Infection—Alka Zane. William R. Warner & Co., Inc. |
| G- 47 | Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company. | G-310 | Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co. |
| G- 49 | The Calcreose Detail Man. Maltbie Chemical Co. | G-318 | Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D., Battle & Company. |
| G- 95 | Everything for the Sick. Lindsay Laboratories. | G-347 | A Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company. |
| G-103 | The Electron, September-October, 1930. McIntosh Electrical Corporation. | G-354 | Getting the Most Out of Life. Stanco, Inc. |
| G-116 | Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc. | G-369 | Burdick Zoolite Series for Infra Red Therapy. The Burdick Corporation. |
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SEND FOR THIS LITERATURE

October, 1930

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- G-401 When the Cross Roads are Reached in Hemorrhoids (Piles). Schering & Glatz, Inc.
- G-402 The First Question—Agarol. Wm. R. Warner & Co., Inc.
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- G-414 Laboratory Tests in Pictures—Silvogon. Ernst Bischoff Company, Inc.
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- G-418 Diphtheria Can Be Kept From Your Family by Protective Immunization. The National Drug Co.
- G-420 That Delicious Flavor. Angostura Dry, the New Ginger Ale. J. W. Wuppermann Angostura Bitters Agency, Inc.
- G-424 When Chemists Turned from Gold to Drugs, Pantopon, Roche. Hoffmann-La Roche, Inc.
- G-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co.
- G-429 Eupinol, a distillate produced at a special temperature from the resinous wood of *Pinus Palustris*. The Tilden Company.
- G-430 Three Timely Papers. McIntosh Electrical Corporation.
- G-433 Changing From This to This. Reducing Glycosuria. The Harrower Laboratory, Inc.
- G-436 Lydin, a New Standardized Masculine Hormone. The Harrower Laboratory.
- G-439 Burdick Light Therapy Equipment. The Burdick Corporation.
- G-440 Net Price List of Pharmaceutical Specialties and Physicians Supplies. Sutliff & Case Co.
- G-441 The Treatment of Luetic Infection—Spirotex — "One of the Liprozymes." Carroll Dunham Smith Pharmacal Co.
- G-443 AbilenA. Its Location, Discovery, Origin, Chemistry, Medicinal or Clinical Value and Uses. The AbilenA Co.
- G-446 Dependable Products. Pan-Secretin Co., Adreno-Spermin Co., Lydin and Pancreas Co. The Harrower Laboratory, Inc.
- G-447 A Short Discussion of Chronic Dermatosis. Carroll Dunham Smith Pharmacal Co.
- G-448 May 1930, Supplement to Net Price List containing new Pharmaceutical Specialties, Solu-Caps, Ointments, Syrups, Tablets. Sutliff & Case Co., Inc.
- G-449 General Catalog of Medicinal Chemicals. Bilhuber-Knoll Corp.
- G-450 Treating The Anemias With The Liprozymes, Kytogen, Hemosol and Erythrosol. Carroll Dunham Smith Pharmacal Co.
- G-451 Helping The Doctor Make Friends of the Children. Carroll Dunham Smith Pharmacal Co.
- G-452 The Hormone, October, 1930. The Harrower Laboratory, Inc.
- G-453 It has helped thousands cure themselves at Home of the Tobacco Habit. The Keeley Institute.
- G-454 Play Safe. The Keeley Institute.
- G-455 AbilenA, The Ideal Cathartic Water. The AbilenA Co.
- G-456 Science Applied to Tobacco. Health Cigar Company, Inc.
- G-457 Zintar for use in Infantile Eczema. The Wm. S. Merrell Company.
- G-458 Effective Salicylate Medication. The Wm. S. Merrell Company.